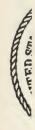
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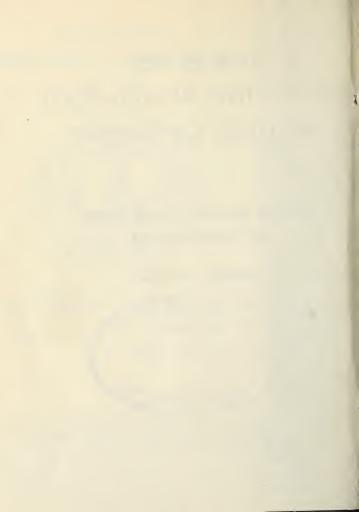
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TABLES FOR ESTIMATING BOARD-FOOT -- VOLUME OF TIMBER X

By Clement Mesavage, forester, Southern Forest Experiment Station and James W. Girard, assistant director, Forest Survey

The tables presented here have been compiled for use in estimating the board-foot contents of eastern hardwoods and of southern hardwood and softwood timber. Where checks have been made in other regions with felled trees not exceeding six 16-foot logs in merchantable height, the measured volumes have agreed closely with corresponding values in these tables. This indicates their possible use outside the regions for which they were primarily prepared. Separate tables¹ are given for the International ¼-inch log rule, the Scribner log rule, and the Doyle log rule.

Table Construction

These tables are based on the assumption that trees having the same diameter and merchantable height will have similar, though not necessarily identical, rates of taper in the sawlog portion above the first log, and that all differences in volume in trees of the same diameter and merchantable height may be attributed largely to taper variations which occur in the first log. These volume differences are provided for by 26 separate tables, each of which shows volume according to diameter classes and an index to first log taper, called form class.

Definition of form class. Form class is the percentage ratio between the diameter, inside bark, at the top of the first 16-foot log and the diameter outside bark at breast height ($4\frac{1}{2}$ feet above the ground). For example, a tree with a first-log scaling diameter of 16.0 inches and a breast-high diameter of 20.0 inches has a form class of $(16 \div 20 \times 100)$ 80 percent.

¹Values are from formulas prepared especially for volume-table construction.

Upper-log tapers. Taper is the decrease of diameter in a log or a tree stem from butt to top. The average upper-log taper rates shown in table 2 were originally compiled from ocular estimates of taper on about 2,000 trees of assorted species in the anthracite region of Pennsylvania, and later modified and extended on the basis of ocular taper estimates made on about 20,000 additional trees throughout the South. Although taper differences exist between and within species, measurements of felled trees summarized in table 3 show that the values given in the tables, which are based on these average tapers, may be applied with reasonable accuracy to a number of species in a wide range of localities.

The following example illustrates how the taper estimates in table 2 were used in compiling the tables. A form-class-80 tree with a diameter of 20.0 inches will have a first-log scaling diameter of 16.0 inches. In a tree having two 16-foot logs, second-log taper is shown by table 2 to be 2.1 inches. Scaling diameter of the second log is therefore 16.0 minus 2.1 or 13.9 inches. The two logs scale 181 and 133 board feet, International ¼-inch, respectively, or 314 board feet for the tree. Volumes for all trees in even 2-inch diameter classes and full log lengths were computed for each form class in this manner. Volumes for odd diameters and half-log lengths were obtained by interpolation.

Use of Tables in Timber Estimating

Procedure. Except for the necessity of determining form class, the procedure in applying these tables in a timber cruise is the same as required for volume tables which are based only on diameter and height. For most accurate results, trees in each desired species group should be tallied by diameter and height classes. An average form class may then be assigned to each species group and volume obtained from the corresponding table. Because form class may vary widely for a given species, more accurate volume estimates

will be obtained if separate form-class ratios are determined for each diameter class tallied as part of the cruising

procedure.

Another method of cruising is to tally only the diameter of the trees in each species group. Tree heights are later determined by measuring sufficient sample trees to plot a satisfactory curve of height over diameter. Volumes for each diameter class are then obtained from a volume table based on diameter and height, and applied to the diameter-class tally. The attached tables can be used with this method, provided the additional factor of form class is obtained for each diameter class.

Merchantable height. Merchantable height includes that portion of a tree from stump height to a point on the stem at which merchantability for saw timber is limited by branches, deformity, or minimum diameter. For smooth stems this minimum diameter is usually not less than 60 percent of tree diameter breast high in the case of the smallest sawlog trees, usually 10 inches, or 40 percent for large trees, 30 to 40 inches in diameter. This definition of merchantability or usable log length must be carefully observed. If height measurements include the small tops to which northern conifers are frequently utilized or the small tops of old-field southern pines made temporarily profitable by wartime conditions, the tables will overscale.

Determination of form class. Cruisers having no previous experience with tree form class will find it necessary to base it on direct measurements of tree diameter and first-log scaling diameter. On standing trees, measurement of diameter at the top of the first log may be secured by climbing or by the use of a light sectional ladder. Two centers and one base section of a window cleaner's ladder are recommended. Extended, these sections are about 17 feet long, and when telescoped they are easily transported. After practice, how ever, ocular estimates of form class of sufficient accuracy for most purposes are possible, and are much preferred because they speed up timber estimating. Proficiency in ocular

estimates of form class can be developed and checked by

the following procedure:

1. Stand away from a tree in position to observe the bole from the point at which tree diameter is measured to the top of the first log. Study the taper in the first log, estimate the form class and record it. In making this estimate, avoid trying to derive it from ocular estimates of the actual diameters.

2. Check the estimate by measuring the form-class percentage as follows:

a. Measure tree diameter to the nearest tenth of an

inch.

b. Measure the scaling diameter at the top of the

first log to the nearest tenth inch.

c. Divide the scaling diameter of the first log by the diameter of the tree. The quotient, expressed as a percentage, is the form class.

3. Compare the results with the estimated form class. Repeat the test on additional trees until proficiency is acquired. A good start in ocular estimating can be developed by a few hours' practice.

Form class of swell-butted species. In swell-butted species, such as cypress and tupelo, volume would be underestimated if tree diameter were measured at breast height, because the upper-log tapers on which the tables are based were correlated with breast-high diameters of trees with normal butt taper. The upper-log tapers of swell-butted trees are less than in trees of normal stem form having the same diameter. Because of this, tree diameter of swell-butted species should be measured about 18 inches above the pronounced swell. Measurement of first-log scaling diameter remains unchanged. In normal trees the two related diameters are 12½ feet apart, but on swell-butted species they may be only 6 to 10 feet, depending on the height of stump and the degree of swell.

Form class of trees chipped for turpentine. When the

tree bole at breast height is deformed by turpentine chipping, tree diameter should be measured just above the highest face. Although the diameter will be smaller, the form class will be higher and consequently there will be a compensating increase in volume. Top of the first log should always be measured at 16 feet above the point where the tree will be cut.

Effect of scaling practice on form class. Although the Doyle log rule was designed for inside-bark scaling practice, it is customary on some private operations in the South to increase the scale, particularly for small logs, by including in log-diameter measurement one or both bark thicknesses to compensate for low values of the rule. Where such scaling practice is observed, the accompanying tables will give volume estimates needing no further correction if form class is based on first-log diameter according to local scaling practice and normal diameter at breast height. For example, a 20-inch tree with a normal form class of 80 percent will have an adjusted form class of 85 percent if an inch is added to the inside-bark scaling diameter of the first log to allow for bark thickness. Including bark thickness in the logdiameter measurement will increase the form class for any tree and consequently the volume read from the table.

Form class averages. Advance knowledge of the form class of common eastern species will be helpful to cruisers unfamiliar with this term (table 4). These averages should not be used in lieu of local determinations unless a considerable amount of error is permissible. For example, second-growth southern pines average about 78, yet the spread in form class ranges from about 65 for small, branchy, old-field pines to 83 for older trees growing in dense stands.

Table Corrections

When it seems likely that the upper-log average tapers assumed in these tables would result in excessive error, the volume in felled trees should be measured for comparison with the corresponding volumes in the tables. Log rules

curved especially for use in volume-table construction are

presented as tables 5, 6, and 7.

Measurement of about 50 trees of assorted diameters in each usable length class should be sufficient. Volume in one-log trees will obviously remain unchanged. If a check shows the tables to be 3 percent high in each height class, they can be easily adjusted. Since the average increase or decrease in volume for a change of 1 percent in form class approximates 3 percent in tree volume, the simplest procedure is to adjust the form class. In this case the volume of a form class 78 tree would be obtained from the form class 77 table. Similarly, if a check revealed the tables 3 percent low, the volume of a form class 78 tree would be obtained from the form class 79 table. The refinement obtained by such a check will seldom be warranted. However, if the check is made the trees measured should be well distributed over the area to which the adjusted tables are to be applied.

Determination of Defect

Estimates of losses in tree volume on account of defect are largely dependent on visible external evidences and require some experience with the species under consideration. When dealing with high-quality timber, use of table 1 will facilitate a log-by-log estimate of quantity and quality loss on account of defect.

Table 1.—Average distribution of tree volume by logs according to log position

Usable length (number of 16-	1	Percent o	f total tr log, by p	ee volum position	ie in eacl	ı							
foot logs)	1st	1st 2d 3d 4th 5th 6th											
1	100 58	42					-						
3 <u>4</u>	42 34	33 29	25 22	15			- 1						
6	29 24	25 23	21 20	15 16	10 11		6						

A werage waver-log tamer (inches) in 16-foot logs

			•		
		6th log		4.4	4.4.6.0 0.00 0.00 0.00 0.00
	96	5th log		3.2	00000000000000000000000000000000000000
18	6-log tree	4th log		22.1	122224
s601 10	[-9	3d log		11.4	1.1.4 1.5 1.5 1.5
noof-or ur		$^{2d}_{\log}$		0.9	1:00
_		5th log	2.9	33335 3335 3335 3335 335 335 335 335 33	3.3.3.4 4.0009
(rncnes)	5-log tree	4th log	2.2	299999 84597	33.30
r (1)	5-log	3d log	1.6	1. 8 1. 9 1. 9 2. 0	22222
tap		2d log	1.1	111111	111111
er-tog	36	4th log	2.0 2.1 2.2 4.4	32222 32222 32222 32222 3222 3222 3222	0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.
ddn	4-log tree	3d log	1.5	999999 9845	2225
rage	4-	2d log	1.3.1.1.2.2.4.1	1.4 1.5 1.5 1.6	1.8
-A W	3-log tree	3d log	1.5 1.6 1.8 1.9 1.9	65666	666666
E 2		2d log	1.3 1.3 1.5 1.6 1.6 1.6	11.00	22222
LABLE Z.	2-log tree	2d log	1.1.6 1.2.0 1.2.0 1.3.0	999999 98450	200000
	Diameter breast	high (inches)	10 12 14 16 20	22 24 28 30	32- 34- 38- 40-

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Table 3.—Comparison of measured board-foot volume with volumes in form-class tables

cotami	cs in joint	Ciass tast	03	
Region and species	Measured	Measured 1	Volume	Differ-
	trees	volume	from tables	ence
South: Loblolly pine Shortleaf pine Slash pine Longleaf pine Cypress	Number	Board feet	Board feet	Percent
	727	175,983	176,905	0.5
	85	20,583	20,272	-1.5
	295	59,845	59,509	-0.6
	238	121,867	122,682	0.7
	54	31,376	31,791	1.3
Total softwoods	1,399	409,654	411,159	0.4
Gums	149	60,289	59,931	-0.6 -1.0 -2.2
Oaks	131	69,532	68,843	
Other hardwoods	60	17,580	17,186	
Total hardwoods Total all species	340	147,401	145,960	-1.0
	1,739	557,055	557,119	(²)
Appalachian: Loblolly pine Shortleaf pine Cypress	110	38,318	38,341	0.1
	117	26,290	26,479	0.7
	30	32,729	32,365	-1.1
Total softwoods	257	97,337	97,185	-0.2
Oaks, hickory, and chestnut	525	239,101	235,544	-1.5
	82	60,483	59,454	-1.7
	107	75,265	75,261	(²)
	67	33,156	32,163	-3.0
	44	6,431	6,396	-0.5
	64	22,242	21,078	-5.2
	20	14,834	14,532	-2.0
	37	11,362	11,254	-1.0
Total hardwoods	946	462,874	455,682	-1.6 -1.3
Total all species	1,203	560,211	552,867	

¹Trees measured with calipers. Bark thickness measured with Swedish bark measurer.
²Negligible.

Table 3.—Comparison of measured board-foot volume with volumes in form-class tables—Continued

Denien and ansaire	Measured	Measured 1	Volume	Differ-
Region and species	trees	volume	from tables	ence
Northeast:	Number	Board feet	Board feet	Percent
Hemlock	102	13,124	313,598	3.6
Virginia pine	18	1,121	31,123	0.2
White pine	71	14,348	314,502	1.1
Total softwoods	191	28,593	29,223	2.2
Maple	38	8,916	9,266	3.9
Beech.	84	19,063	18,976	-0.5
BirchOaks	48	12,965	13,109	1.1 2.4
Other hardwoods	55 77	8,053 12,314	8,243 12,668	2.4
Total hardwoods	302	61,311	62,262	1.6
Total all species	493	89,904	91,485	1.8
West:				
Ponderosa pine				
(old-growth) Ponderosa pine	240	451,212	447,722	-0.8
(second-growth)	262	119,473	119,229	-0.2
Total	502	570,685	566,951	-0.7
Puerto Rico:				
Tobonuca, Laurel sabino	249	101,687	101,611	-0.1
Haiti:				
Pinus occidentalis	100	39,418	39,280	-0.4
Scotch pine	70	13,565	313,574	(2)
Luxembourg: Norway spruce	22	4,765	34,698	-1.4
Total foreign species	441	159,435	159,163	-0.2

 $^{^1\}mathrm{Trees}$ measured with calipers. Bark thickness measured with Swedish bark measurer.

²Negligible.

 $^{^3\}mathrm{Merchantable}$ height adjusted to conform with table restrictions on height measurement.

Table 4.—Form-class averages by species—Eastern United States¹

Species	North- east	Appa- lachian	Missis- sippi Delta	South	Cen- tral States	Lake States
Softwoods: Southern pines (second-growth) Southern pines (old-growth) White pine Hemlock Spruces Balsam fir Cypress	80 78 78 78 80	79 78 82 278	278	78 84 278	80 78 78	78 77 80 80
Hardwoods: White oak (second-growth) White oak (old-growth) Red oaks Yellow poplar (second-growth)	78 82 78 78	78 82 78 78	78 80 78	78 80 78	78 82 78	78 80 78 78
Yellow poplar (old-growth) Cherry Basswood Walnut Beech Maples Birches Upland ashes Red gum and black gum	80 80 78 84 79 78 80 78	82 82 80 78 84 79 78 82 78	80 	81 	82 82 78 78 82 79 78 82 82	80 80 78 78 82 78 78 82 82
Hickories. Swamp ash. Cottonwood and willow Tupelo. Other common hardwoods.	78 	78 78	76 280 76 280	77 78 78	78	78 78

¹Scaling diameter of first 16-foot log is inside bark, average way, to nearest inch.

²Form class of cypress, tupelo, and swamp ash based on tree diameter measured at about 18 inches above pronounced swell.

Table 5.—Scale of 16-foot logs to nearest board foot from International log rule, ¼-inch kerf¹ [Tenths of inches]

D.i.b.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
(inches)										
6	19	20	21	22	23	23	24	25	26	27
7 8	28 39	29 40	30 41	31 42	32 43	33 45	34 46	35 47	36 48	38 50
9	51	52	54	55	56	58	59	60	62	63
10	65	66	68	69	71	72	74	75	77	78
11	80	82	83	85	87	88	90	92	93	95
12	97 115	99 117	100 119	102 121	104 123	106 125	108 127	110 129	112	114 133
14	136	138	140	142	144	146	148	151	153	155
15	157	160	162	164	166	169	171	173	176	178
16	181	183	185	188	190	193	195	198	200	203
17	205 232	208 235	211 237	213 240	216 243	219 246	221 249	224 251	227 254	229 257
19	260	263	266	269	272	275	249	281	284	287
20	290	293	296	299	302	305	308	311	315	318
21	321	324	327	331	334	337	341	344	347	351
22	354 388	357 392	361 395	364 399	367 403	371 406	374	378	381 417	385 421
24	424	428	432	435	439	443	410 447	413 451	454	458
25	462	466	470	474	478	481	485	489	493	497
26	501	505	509	513	517	521	526	530	534	538
27	542	546	550	555	559	563	567	572	576	580
28	584 628	589 633	593 637	598 642	602 647	606 651	611 656	615 660	620 665	624 669
30	674	679	683	688	693	697	702	707	712	716
31	721	726	731	736	741	745	750	755	760	765
32	770	775	780	785	790	795	800	805	810	815
33	820 872	826 878	831 883	836 888	841 894	846 899	851 904	857 910	862 915	867 921
35	926	931	937	942	948	953	959	964	970	976

¹Computed from formula $V = 0.796 D^2 - 1.375D - 1.230$.

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Table 5.—Scale of 16-foot logs to nearest board foot from International log rule, ¼-inch kerf¹—Continued [Tenths of inches]

D.i.b. (inches)	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
38	1, 096 1, 156	1, 044 1, 102 1, 162	1, 049 1, 108 1, 168	1, 055 1, 114 1, 174	1, 061 1, 120 1, 181	1, 067 1, 126 1, 187	1, 015 1, 073 1, 132 1, 193 1, 255	1, 079 1, 138 1, 199	1,084	1, 032 1, 090 1, 150 1, 211 1, 274
42 43 44	1, 345 1, 412 1, 480	1, 352 1, 419 1, 487	1, 359 1, 425 1, 493	1, 365 1, 432 1, 500	1, 372 1, 439 1, 507	1, 378 1, 446 1, 514	1, 319 1, 385 1, 452 1, 521 1, 592	1, 392 1, 459 1, 528	1, 398	1, 339 1, 405 1, 473 1, 542 1, 613
47	1,693	1,700	1,708	1,715	1,722	1,730	1, 664 1, 737 1, 813	1,745	1,752	1, 686 1, 760 1, 835

¹Computed from formula $V = 0.796 D^2 - 1.375D - 1.230$.

Table 6.—Scale of 16-foot logs to nearest board foot, Scribner rule, (diameter inside bark to tenth of an inch)
[Tenths of inches]

D.i.b. (inches)	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
6	12	13	14	15	16	16	17	18	19	20	
7	21	22	23	24	24	25	26	27	28	29	
8	30	31	32	33	34	36	37	38	39	41	
9	42	43	45	46	47	48	50	51	52	54	
10	55	56	58	60	61	63	64	66	67	69	
11	70	72	74	75	77	78	80	81	83	84	
12	86	88	90	91	93	95	97	99	101	102	
13	104	106	108	110	111	113	115	117	119	121	
14	123	125	127	129	131	133	135	137	140	142	
15	144	146	148	150	153	155	157	159	161	164	
16	166	168	171	173	175	177	180	182	185	187	
17	189	191	194	196	199	202	204	207	210	213	
18	216	218	221	224	227	229	231	234	237	240	
19	243	245	248	251	254	257	260	263	266	269	
20	272	275	278	281	284	287	290	293	296	299	
21	302	305	308	311	314	317	320	323	327	330	
22	334	337	340	344	348	351	354	358	361	365	
23	368	372	375	379	382	386	390	394	397	400	
24	403	406	410	414	418	422	426	429	432	436	
25	440	444	448	452	456	460	464	468	472	475	
26	478	482	486	490	494	498	502	506	510	514	
27	518	522	526	530	534	538	542	546	550	554	
28	559	563	567	571	575	579	583	587	592	597	
29	602	606	611	615	620	624	629	633	638	642	
30	647	651	656	660	665	669	674	678	683	688	
31	693	698	703	708	712	717	722	726	731	736	
32	741	746	751	756	761	766	770	775	780	785	
33	790	795	800	805	810	815	820	825	830	835	
34	841	846	851	856	862	867	872	877	883	888	
35	894	900	905	910	915	921	926	931	937	942	

¹Computed from formula V=. 79D2-2D-4.

Table 6.—Scale of 16-foot logs to nearest board foot, Scribner rule, (diameter inside bark to tenth of an inch)—Continued [Tenths of inches]

D.i.b. (inches)	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
38 39 40 41	1, 061 1, 120 1, 180	954 1, 010 1, 067 1, 126 1, 186 1, 249 1, 312	1, 016 1, 073 1, 132 1, 192 1, 255	1, 021 1, 079 1, 138 1, 198	1, 027 1, 085 1, 144 1, 204 1, 268	1, 032 1, 091 1, 150 1, 210 1, 274	1, 038 1, 097 1, 156 1, 216 1, 280	1, 103 1, 162 1, 222 1, 286	1, 049 1, 109 1, 168 1, 228 1, 293	1, 115 1, 174 1, 235 1, 300

¹Computed from formula V=.79D²-2D-4.

Table 7.—Scale of 16-foot logs to nearest board foot from Doule rule1

 ¹Computed from formula: $\frac{(D-4)^2 \times L}{}$

Table 7.—Scale of 16-foot logs to nearest board foot from Doyle rule 1 —Continued

[Tenths of inches]

D.i.b. (inches)		.1	.2	.3	.4	.5	.6	.7	.8	.9
37 38	1, 089 1, 156	1,096 1,163	1, 037 1, 102 1, 170	1, 109 1, 176	1, 050 1, 116 1, 183	1, 122 1, 190	1, 063 1, 129 1, 197	1, 136 1, 204	1, 076 1, 142 1, 211	1, 018 1, 082 1, 149 1, 218 1, 289
40 41 42	1,369	1, 303 1, 376 1, 452	1, 384	1, 391	1, 399	1,406	1, 340 1, 414 1, 490	1, 421	1,429	1, 362 1, 436 1, 513

¹Computed from formula: $\frac{(D-4)^3 \times L}{16}$

International 1/4-inch Rule (Form Class 65-90)

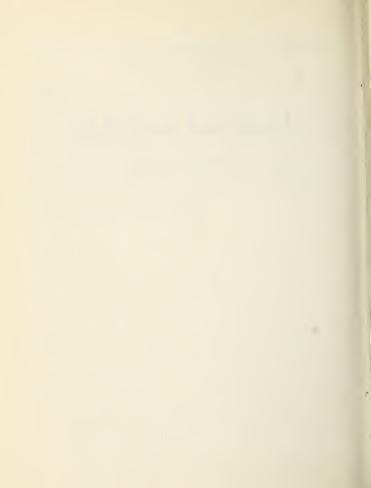


Table 8. — Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VO.	LUM	E (b	oard 1	eet) 16-F0	BY NOT I	LOGS	BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	4½	5	51/2	6
101 111 121 131 141	23 30 36 44 52 62	29 38 46 57 68 81	35 46 57 70 84 100	64 80 96 114	71 89 107 129						
16 17 18 19 20	71 82 92 104 115	94 108 122 138 154	116 134 152 172 193	134 155 176 200 224	151 176 200 228 256	162 190 216 247 278	174 204 233 266 299		332		
21 22 23 24 25	128 142 156 171 187	172 192 211 232 254	217 241 266 292 320	252 280 311 342 376	288 320 356 392 431	313 348 387 426 470	338 377 418 459 508	358 401 447 492 546	378 425 476 526 583		
26	203 220 237 256 275	276 300 324 350 376	349 380 410 444 478	410 446 483 523 564	470 513 556 602 649	514 560 608 658 708	557 608 659 714 768	598 654 710 772 832	640 701 762 829 896		854
31 32 33 34 35	295 315 336 357 380	404 432 462 492 524	514 550 588 626 668	607 651 697 743 794	700 752 806 860 920	766 825 885 944 1,011	833 898 964 1, 029 1, 102	1, 039 1, 110	1, 038 1, 114 1, 191	1, 200 1, 285	1, 192 1, 286 1, 379
36	403 427 451 476 501	557 590 624 661 697	711 754 798 846 893	954 1, 010	1, 044 1, 109 1, 174	1, 148 1, 218 1, 293	1, 175 1, 252 1, 328 1, 412 1, 495	1, 356 1, 442 1, 529	1, 460 1, 556 1, 646	1,566 1,666 1,764	1, 672 1, 777 1, 882

Table 9.—Gross volume of tree, International 1/4-inch rule

Tree diam-		VO					BY N OT I			OF	
eter (inches)	1	1½	2	21/2	3	31/2	4	4½	5	51/2	6
10 11 12 13 14 15	24 31 38 46 54 64	30 40 49 60 70 84	37 48 60 74 87 104	67 83 99 119	74						
16 17 18 19 20	74 84 95 107 119	98 112 126 144 160	121 140 158 180 201	140 162 184 209 234	158 184 209 238 266	170 199 226 258 288	183 214 244 278 311				
21 22 23 24 25	132 146 161 176 194	178 197 218 238 263	224 248 274 301 332	261 290 321 353 390	298 331 368 405 448	324 361 400 440 488	351 391 433 475 528	372 416 462 510 568	394 440 492 545 608		
26 27 28 29 30	211 228 246 265 284	363	364 396 427 461 495	427 465 503 544 584	490 534 579 626 673	536 584 633 684 736	582 634 687 742 798	626 684 741 803 865	671 733 795 864 932	843 920	
3132333435	304 324 346 367 392	446	567 606 645		777 832 887		930	1,003 1,075 1,148	1, 076 1, 154 1, 232		1, 234 1, 330 1, 426
36	492	612 646 684	782 827 875	933 988 1, 046	1, 084 1, 150 1, 216	1, 193 1, 265 1, 340	1, 224 1, 302 1, 380 1, 465 1, 550	1, 411 1, 499 1, 588	1, 520 1, 618 1, 710	1, 630 1, 734 1, 838	1, 740 1, 849 1, 956

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Table 10.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		vo					BY N OT I			OF	
(inches)	1	1½	2	2½	3	3½	4	4½	5	5½	6
10	25 32 39 48 56 66	32 41 50 62 74 86	39 50 62 76 91 107	70 87 104 124	77 98 118 140						
16 17 18 19 20	75 87 99 111 123	99 116 132 149 166	123 144 165 186 208	142 167 192 217 242	162 190 218 248 277	176 206 236 269 300	189 222 255 290 324				
21 22 23 24 25	137 151 167 183 200	184 204 226 248 272	232 257 286 314 344	271 300 335 369 404	310 343 384 424 464	337 374 418 460 506	364 405 451 497 548	386 431 482 534 589	409 457 514 571 630		
26. 27. 28. 29. 30.	216 235 254 274 293	294 322 348 376 402	373 408 442 477 512	438 480 522 563 604	504 552 601 649 697	552 604 658 710 762	599 657 715 772 828	644 708 771 835 898	690 758 827 898 968	878 957 1, 036	929 1, 016
31 32 33 34 35	314 334 358 381 404		548 585 628 671 715	649 694 746 798 850		884 950 1, 017		1, 040 1, 120 1, 199	1, 115 1, 202 1, 288	1,389	1, 280 1, 385 1, 490
36. 37. 38 39. 40	428 454 481 508 534	630 668	905	964 1, 024 1, 082	1, 120 1, 192 1, 260	1, 234 1, 312 1, 390	1, 261 1, 347 1, 433 1, 520 1, 607	1, 460 1, 557 1, 648	1, 574 1, 681 1, 775	1, 689 1, 802 1, 904	1, 804 1, 923 2, 032

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Table 11.—Gross volume of tree, International 1/4-inch rule

						,					
Tree diam- eter		VO		E (be			BY NOT I			OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	$4\frac{1}{2}$	5	5½	6
10 11 12 13 14 15	26 34 41 50 58 68	34 44 53 65 76 90	41 53 65 80 94 112	74 91 108 128	83 102 121 145						
16 17 18 19 20	78 89 100 114 127	104 118 134 153 171	129 148 168 192 215	149 172 195 223 251	169 196 222 254 287	183 212 241 276 312	228 260				
21 22 23 24 25	142 157 172 188 206	192 213 234 256 281	242 269 296 324 356	282 314 347 380 418	323 359 398 436 480	352 392 434 475 525	382 426 470 514 570	405 454 503 552 613	428 481 536 591 656		
26	224 242 260 281 302	331 356 386	388 420 453 491 529	456 495 534 580 625		575 624 674 732 789	679 733 795	673 732 792 862 931	786 851 928	904	956 1, 052
31	324 347 370 392 418	478 510 542	570 610 650 691 739	724 773 822	839 896 953	923 986 1,050	932 1,007 1,076 1,146 1,229	1, 087 1, 163 1, 239	1, 167 1, 250 1, 332	1,436	1, 343 1, 442 1, 540
36	468 493 522	650 686 727	932	994 1, 051 1, 115	1, 156 1, 224 1, 298	1, 274 1, 349 1, 434	1, 312 1, 393 1, 474 1, 569 1, 664	1, 512 1, 602 1, 701	1, 630 1, 730 1, 833	1, 749 1, 855 1, 966	1, 868 1, 980 2, 100

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Table 12.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VO					BY N OT I			OF	
(inches)	1	11/2	2	2½	3	3½	4	$4\frac{1}{2}$	5	51/2	6
10	27 34	34 44	42 54								
12 13 14	42 51 60	54 67 80	67 83 99	76 94 113	85 106 127		145				
15	70	93	116	133	150	162	174				
16 17 18	80 92 104	106 123 140	132 154 175	153 178 204	174 203 232	188 220 252	203 238 272				
19	118 131	158 177	199 223	232 260	265 298	288 324	311 350		-		
2122	146 162	198 220	250 277	292 324	335 372	366 406	396 441	421 470	446 500		
23 24 25	178 195 212	242 266 290	307 337 368	360 396 433	414 456 498	452 497 544	490 538 591	525 578 636	560 619 680		
26 27	229 249	314 342	398 434	468 512	539 590	592 647	644 704	693 759	742 814		
28	269 290 311	369 399 428	469 508 546	554 600 646	692	702 759 817	763 826 889		964	940 1, 028 1, 116	1,092
3132	334 357	461 493	588 629	697 748		954	1,041	1, 124	1, 207		1,389
33 34 35	382 406 430	528 562 596	673 717 762	800 854 908	991	1,092	1, 118 1, 194 1, 272	1, 292	1,389	1,498	1,607
36	454 482	631 670	808	964	1, 119	1, 234	1, 349 1, 438	1, 462	1, 575	1, 692	1,809
38 39 40	509 538	708 750	908 963	1,088 1,154	1, 268 1, 344	1,398 1,484	1, 528 1, 625 1, 722	1, 662 1, 763	1, 796 1, 901	1, 926 2, 040	2, 057 2, 180
10	307	192	1, 018	1, 218	1, 419	1, 570	1, 722	1, 504	2, 000	2, 134	2, 302

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Table 13.—Gross volume of tree, International 1/4-inch rule

Tree diam-	VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS										
eter (inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10 11 12 13 14 15	28 36 43 52 62 72	36 46 56 69 82 96	44 56 69 86 102 120	78 98 116 138	88 110 131 156						
16 17 18 19 20	83 96 108 122 136	110 128 145 164 184	138 160 182 206 231	160 186 212 241 270	182 212 242 276 309	198 230 263 300 336	213 248 284 324 364				
21 22 23 24 25	151 166 183 200 218	204 226 250 273 299	258 285 316 346 380	302 334 371 408 448	346 383 426 469 515	378 420 466 511 564	410 457 505 553 612	436 487 541 595 659	462 517 577 637 706		
26	237 258 278 300 321	325 354 382 412 442	413 450 486 525 564	487 531 575 622 668	561 612 664 718 771	616 672 728 788 846	671 732 793 857 921		848 921 1, 002	978 1,068 1,158	1, 035 1, 134
31 32 33 34 35	344 367 392 417 444	475 508 542 578 616	606 648 693 738 788	719 770 825 880 940	957 1, 021	984 1, 055 1, 126	998 1,075 1,153 1,231 1,318	1, 162 1, 246 1, 332	1, 248 1, 340 1, 433	1, 444 1, 546	1, 437 1, 548 1, 659
36 37 38 39 40	470 498 526 555 584	654 693 732 774 817	939 994	1,062 1,126 1,192	1, 237 1, 313 1, 389	1, 366 1, 449 1, 536	1, 404 1, 494 1, 585 1, 684 1, 782	1, 623 1, 725 1, 828	1, 752 1, 865 1, 971	1, 880 2, 000 2, 116	2, 008 2, 134 2, 260

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Table 14.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10 11 12 13 14 15	29 37 45 54 63 75	38 48 58 71 84 100	46 59 72 88 104 124	82 101 120 144	92 114 135 163	144 176					
16 17 18 19 20	87 100 112 126 140	116 134 150 170 190	145 167 189 214 239	168 194 220 250 280	191 221 251 286 320	208 240 274 312 349	224 260 296 337 378		423		
21 22 23 24 25	156 171 188 205 226	211 232 256 280 309	266 294 325 356 392	312 344 382 419 462	358 395 438 482 532	391 433 479 526 583	424 471 520 570 634	452 503 558 614 684	479 535 597 659 734		
26. 27. 28. 29. 30.	246 266 287 309 331	338 366 395 426 456	429 466 503 542 582	506 551 596 642 690	583 636 688 743 798	641 698 755 816 876	699 760 822 838 955	754 821 889 963 1, 038	882 956 1, 038	1,016 1,108	1, 077 1, 178 1, 279
31 32 33 34 35	354 378 403 428 456	490 523 558 594 634	625 668 714 759 812	742 794 850 905 969	921 986 1, 051	1, 016 1, 088 1, 160	1, 111 1, 190 1, 269	1, 202 1, 287 1, 373	1, 292 1, 384 1, 477	1, 389 1, 492 1, 594	1, 382 1, 486 1, 599 1, 712 , 1835
36	485 514 542 572 602	676 716 756 800 842	918 970 1, 027	1, 099 1, 164 1, 232	1, 280 1, 357 1, 436	1, 414 1, 500 1, 589	1, 549 1, 642 1, 742	1, 683 1, 787 1, 892	1,817 1,932 2,042	1, 952 2, 072 2, 192	1, 958 2, 086 2, 213 2, 342 2, 470

Table 15.—Gross volume of tree, International 1/4-inch rule

Tree diam-	VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS										
eter (inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	30 38 46 56 66 77	39 50 60 74 88 102	48 61 74 92 109 128	84 105 126 148			163				
16 17 18 19 20	88 102 115 130 144	118 136 155 175 195	147 171 195 220 246	171 200 228 258 288	195 228 261 296 331	212 248 284 322 360	268 308 349				
21 22 23 24 25	160 176 194 213 232	217 240 265 292 318	274 303 336 370 404	396	370 409 456 503 550	404 448 499 550 603	487 542 596	642	553 621 689		
26 27 28 29 30	251 274 296 318 341		439 480 520 560 601	567 616	768	657 720 782 844 906	853 920	848 923 998	911 993 1, 076	1, 056 1, 149 1, 242	1, 119 1, 222
31 32 33 34 35	364 388 416 443 470	504 538 576 615 654	644 687 737 787 838	818 878 939	949 1, 020 1, 091	1, 048 1, 126 1, 206	1, 067 1, 146 1, 233 1, 320 1, 408	1, 240 1, 334 1, 430	1, 333 1, 436 1, 539	1, 434 1, 548 1, 661	1, 535 1, 659 1, 783
36	497 528 559 590 620	825	946 1,002 1,060	1, 133 1, 203 1, 272	1, 320 1, 404 1, 484	1, 459 1, 552 1, 643	1, 497 1, 598 1, 700 1, 802 1, 905	1, 738 1, 852 1, 958	1,878 2,003 2,114	2, 017 2, 150 2, 270	2, 156 2, 296 2, 426

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Table 16.—Gross volume of tree, International 1/4-inch rule

Tree diam-	VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS										
eter (inches)	1	1½	2	21/2	3	3½	4	41/2	5	51/2	6
10 11 12 13 14 15	31 40 48 58 68 80	40 52 63 77 90 107	49 64 78 96 113 134	89 110 130 155	100 123 146 176		167				
16 17 18 19 20	92 104 117 132 148	123 140 158 179 201	154 176 199 226 254	180 206 232 265 298	205 235 265 304 342	222 256 290 332 374	240 277 314 360 405				
21 22 23 24 25	166 183 201 219 240	226 250 274 300 329	285 316 348 381 418	334 372 410 449 494	384 427 472 517 569	421 470 518 566 624	458 512 563 614 680	488 546 604 662 733	581 645 709		
26	260 281 302 326 351	358 387 416 451 486	455 493 531 576 620	538 584 630 683 736	675 729 790	684 742 801 869 936	810 873 948	876 946 1, 029	942	1, 185	1, 148 1, 260
31	377 403 428 454 484	522 558 594 631 674	667 714 761 808 864	965	988 1, 055 1, 122	1, 092 1, 166 1, 240	1, 196 1, 277 1, 358	1, 294 1, 383 1, 472	1, 296 1, 393 1, 489 1, 585 1, 702	1, 498 1, 604 1, 711	1, 603 1, 720 1, 837
36	513 542 572 604 637	846	972 1,026 1,088	1, 165 1, 232 1, 306	1, 358 1, 438 1, 524	1, 503 1, 591 1, 690	1, 648 1, 744 1, 855	1, 792 1, 900 2, 018	1, 818 1, 937 2, 056 2, 177 2, 298	2, 081 2, 208 2, 338	2, 225 2, 359 2, 500

Table 17.—Gross volume of tree, International 1/4-inch rule

										1	
Tree diam- eter		VO			oard f					OF	
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	32 41 50 60 71 82	42 54 66 80 94 110	51 66 81 100 118 137	92 114 136 159	129		177 211				
16 17 18 19 20	93 107 121 137 153	124 144 164 186 208	156 181 206 235 263	182 212 241 274 308	242 276 314	226 264 302 344 386	286 327 374				
21	170 188 208 227 246	232 257 284 312 338	294 326 361 396 431	345 383 426 468 510	396 440 490 539 588	435 484 537 590 646	474 528 584 641 704	505 564 628 692 759	671 742		
26	266 288 311 336 361	366 398 430 465 500	466 507 548 594 639	551 600 650 705 758	636 694 753 816 878	701 765 829 898 966	766 836 905 980 1, 055	904 980 1,064	972 1, 056 1, 149	1, 123 1, 227	1, 305
31	387 413 442 470 498	536 574 614 654 694	686 734 786 837 890	876 938 1,000	948 1, 017 1, 090 1, 164 1, 238	1, 124 1, 206 1, 288	1, 322 1, 412	1, 334 1, 432 1, 530	1, 436 1, 542 1, 649	1, 546 1, 663 1, 780	1, 656 1, 784 1, 912
36 37 38 39 40	526 558 589 622 656	824 872	1, 001 1, 059 1, 122	1, 200 1, 272 1, 348	1, 313 1, 399 1, 485 1, 574 1, 662	1,550 1,644 1,746	1,700 1,804 1,918	1, 850 1, 966 2, 085	1, 999 2, 128 2, 252	2, 148 2, 285 2, 420	2, 296 2, 442 2, 588

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Table 18.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		vo	LUM	E (be USAI	oard f	eet) I 16-FO	BY N OT I	UMI OGS	BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	5½	6
10	33 42	43 55	53 68								
11	51	67	83	95	107						
1314	62 72	82 96	$\frac{102}{120}$	117 138	132 157	169	181				
15	84	113	142	164	187	203	219				
16 17	97 111	130 150	163 188	190 220	217 252	237 275	257 298				
18 19	125 141	169 192	$\frac{213}{242}$	250 284	286 326		339 386				
20	157	214	271	318	365				488		
21 22	175 193	239 264	303 335	356 394	410 454		488 544	521 582	554 620		
23	212 232	291 318	370 405	437 479	504 553	553	602	647	692		
24 25	254		444	525	606				844		
26	275		483								
27 28	298 321	444	525 567	622 673	779	858	938	1,016	1,095		1, 234
29 30	346 371		612 658	727 782	842 905						1, 352 1, 469
31	398		706								1, 588
32	424 452	630	755 807	964	1, 121	1,240	1,360	1, 474	1, 589	1.714	1, 708 1, 838
34	481 512		859 916	11,027	11,195	11,322	11,450	11,574	11.697	11.833	1, 969 2, 100
36	542		974	1, 166	1, 357	1, 504	1, 652	1, 794	1, 937	2, 084	2, 232
37 38	574 606	803 848	1,032	1, 238 1, 312	1, 445	1, 602 1, 698	1, 758 1, 864	1, 914 2, 032	2, 069	2, 224	2, 380 2, 528
39 40	640	898	1, 156	1,389	1,622	1,801	1,980	2, 154	2, 327	2, 502	2, 676 2, 824
	1	1	-,0	1-, 200	1,,,,,	1,001	1,000		12, 200	1, 000	12,021

Table 19.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	41/2	5	51/2	6
10 11 12 13 14 15	34 43 52 63 74 87	44 56 68 84 99 116	55 70 85 104 124 146	62 80 98 120 143 170	69 90 110 136 162 194	174 210	186 226				
16 17 18 19 20	100 114 129 146 162	134 154 175 198 220	169 195 221 250 279	198 228 259 294 328	226 262 297 337 377	246 286 325 369 413	267 310 353 401 449				
21 22 23 24 25	180 198 218 237 260	246 271 299 326 359	312 344 380 415 458	367 406 448 491 542	422 467 517 567 626	463 514 568 622 688	504 560 618 676 751	538 600 665 730 812	639 712 785		
26 27 28 29 30	284 308 331 356 381	392 425 458 494 529	500 542 585 631 677	592 644 696 750 805	684 745 806 870 933		898	972 1, 052 1, 139	1, 046 1, 134 1, 230		1, 280 1, 398
31 32 33 34 35	408 435 464 493 526	567 606 646 687 735	726 776 828 881 944	926 990 1,054	1,077 1,152 1,227	1, 192 1, 276 1, 359	1, 216 1, 307 1, 399 1, 491 1, 600	1, 417 1, 518 1, 618	1, 527 1, 636 1, 746	1, 644 1, 764 1, 886	1, 761 1, 893 2, 025
36 37 38 39 40	559 592 624 658 693	829 874 924	1, 006 1, 066 1, 125 1, 190 1, 256	1, 280 1, 354 1, 432	1, 493 1, 582 1, 673	1, 656 1, 754 1, 858	1,818 1,926 2,042	1, 980 2, 101 2, 223	2, 142 2, 276 2, 404	2, 303 2, 445 2, 584	2, 464 2, 614 2, 765

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Table 20.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VO:	LUM	E (bo USAE	pard f	eet)] [6-FO	BY N OT I	UMI	BER	OF	
(inches)	1	11/2	2	$2\frac{1}{2}$	3	31/2	4	41/2	5	5½	6
10 11 12	35; 44 54	46 58 71	57 72 88	64 82 102	70 92 115						
13 14 15	66 77 90	87 103 120	108 129 151	125 149 176	142 169 200	182 218	196				
16 17 18	102 118 133 150	138 159 180 204	173 200 228 258	202 234 268 303	231 269 307 348	252 294 336 382	274 320 366 415				
19	166	204	287 287	338	388	426	464		524		
21 22 23 24 25	184 203 224 246 268	252 278 308 338 370	320 354 392 431 471	377 417 464 510 558	434 480 535 590 646	477 528 588 647 710	520 577 640 704 775	556 618 690 761 838	592 660 739 818 900		
26 27 28 29 30	290 316 341 366 392	400 437 472 508 544	511 558 604 650 697	606 662 718 774 830	701 767 833 898 962	990		1,002 1,090 1,178	1, 079 1, 175 1, 272	1, 251 1, 360	1, 327 1, 448
31 32 33 34 35	420 447 478 509 540	584 622 666 710 756	912	953 1, 022 1, 092	1, 108 1, 190 1, 271	1, 228 1, 319 1, 410	1, 254 1, 347 1, 448 1, 548 1, 652	1, 461 1, 571 1, 680	1, 575 1, 694 1, 813	1, 696 1, 827 1, 958	1, 816 1, 960 2, 104
36 37 38 39 40	572 607 642 677 712	850 900	1, 094 1, 159	1, 314 1, 395	1,534 1,631	1,703 1,810	1, 755 1, 872 1, 989 2, 108 2, 226	2, 039 2, 170	2, 206 2, 351	2, 373 2, 527	2, 540 2, 703

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Table 21.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VO					OT I			OF	
(inches)	1	1½	2	21/2	3	3½	4	4½	5	51/2	6
10	36 46	48 61	59 76	66 86	73 96						
12	56 67	74 90	$\frac{92}{112}$	106 130	$\frac{120}{147}$	128 158	168				
14 15	78 92	105 124	132 156	153 182	174 208	187 225	200				
16 17	106 121	143 164	180 206		241 278	263 304					
18 19	136 154	184 209	233 264	274 311	314 358	344 392	374				
20	171	234	296	348	401	440	480	511	542		
21	191 211 231	262 290	332 368	434	450 500	552	603	579 647	691		
23 24 25	251 251 275	346		523	552 605 665	664	723	714 782 865	840		
26 27 28	299 323 347	448	572	680	788	* 870		1,032	1, 111	1 290	
29 30	375	521	667	794	920	1,016	1, 112 1, 198	1, 210	1,308	1,398	1,488
31 32 33	462	644	826	988	1, 149	1, 274	1, 299 1, 400 1, 495	1,518	1, 637	1,762	1,888
34 35	521	728	934	1,119	1,304	1, 447	1, 590 1, 702	1,727	1,864	2,014	2, 163
36 37 38 39	622 656 694	873 921 976	1, 124 1, 186 1, 258	1, 351 1, 428 1, 514	1, 578 1, 670 1, 769	1, 752 1, 854 1, 968	1, 814 1, 926 2, 038 2, 166	2, 099 2, 224 2, 359	2, 272 2, 410 2, 552	2, 444 2, 590 2, 744	2, 616 2, 771 2, 937
40	731	1, 030	1, 329	1, 598	1, 868	2, 081	2, 100	2, 494	2, 693	2, 898	3, 10

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Table 22.—Gross volume of tree, International 1/4-inch rule

Tree diam-		vo					BY N			OF	
eter (inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10	38 48	50 63	61 78	69 89	77 100						
12 13 14	58 70 82	77 94 110	96 117 138	110 135 160	124 153 182	132 164 196	211				
15	95 108	128 146	160 183	187 214	214 246	233 269	292				
17 18 19	124 140 158	168 190 215	212 240 272	249 282 321	286 325 370		340 388 442				
20	176 196	240 269	305 342	360 403	414	455 511	496 558				
22 23 24	216 238 260	297 328 359	378 418 458	446 494 543	514 571 628	568 629	621 687 753	666 740 814	710 792		
25	282 305	390 422	499 540	592	685	756	826	893	960		
27 28 29 30	331 357 385 413	460 496 536 575	588 635 686 737	699 756 817	810 877 948	895 969 1, 048		1,062 1,152 1,249	1, 144 1, 242 1, 350	1, 323 1, 444	1, 404 1, 537
31 32 33	444 474 506	618 661 706	792 848 907	946 1, 014 1, 086	1, 100 1, 181 1, 265	1, 219 1, 310 1, 404	1, 338 1, 440 1, 544	1, 455 1, 562 1, 676	1, 572 1, 685 1, 808	1, 690 1, 815 1, 951	1, 808 1, 945 2, 094
34	538 570		1,026	1, 230	1, 435	1, 594	1, 647 1, 754	1, 907	2, 060	2, 222	2, 384
36	602 638 674 712 750		1, 154 1, 220 1, 292	1, 387 1, 470 1, 557	1,620 1,720 1,822	1,800 1,910 2,027	2, 232	2, 159 2, 294 2, 432	2, 338 2, 488 2, 632	2, 516 2, 675 2, 832	2, 694 2, 862 3, 031

Table 23.—Gross volume of tree, International 1/4-inch rule

Tree diam-		Vo			oard :					OF	
eter (inches)	1	1½	2	21/2	3	3½	4	4½	5	51/2	6
10	39 49 59 71 83 98	51 64 78 96 112 132	63 80 98 120 141 166	72 92 112 138 164 194	80 104 127 156 186 221	136 168 201 240	146 181 216				
16 17 18 19 20	112 128 144 162 181	151 174 196 222 248	190 219 248 281 314	223 258 292 332 370	336 382	280 325 369 420 470					
21 22 23 24 25	201 221 244 266 290	276 304 336 368 402	350 387 428 469 514	458 507	478 528 586 644 706	526 583 646 708 779	706	616 685 761 836 922	656 732 816 899 992		
26. 27. 28. 29. 30.	315 341 367 396 424	436 474 510 551 591	558 606 654 706 758	779 842	836 904 977	925 1,000 1,080	1,014 1,096 1,184	1, 100 1, 190 1, 289	1, 185 1, 284 1, 394	1, 368 1, 491 1, 613	1, 453 1, 588
31	454 485 518 550 585	634 678 724 770 820	930 989	1, 042 1, 114 1, 186	1, 213 1, 298 1, 383	1, 346 1, 442 1, 537	1, 480 1, 586 1, 691	1,606 1,722 1,838	1,733 1,858 1,984	1, 740 1, 867 2, 005 2, 144 2, 291	2, 001 2, 152 2, 304
36 37 38 39 40	620 656 693 732 770	870 922 974 1,031 1,086	1. 188	1.430	1.672	1.858	2.044	2. 230	2, 416	2, 438 2, 600 2, 761 2, 920 3, 080	2, 783

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Table 24.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VOL	UMI U	E (boa	ard fe LE 1	et) B 6-FO	Y N'OT L	UMB OGS	ER (F	
(inches)	1	1½	2	21/2	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14	40 50 60 72 85	52 66 80 97 114	65 82 100 122 144	74 94 115 141 167	82 106 130 160 190	140 173 206	186 221				
15 16 17 18 19 20	100 115 132 148 166 185	135 156 179 202 228 254	170 197 226 256 290 323	231 266 301 341 381	228 265 306 346 392 439	380 432	316 366 415 471				
21 22 23 24 25	206 227 250 272 298	283 312 344 376 413	360 398 439 480 528	471 520	492 544 602 659 726	600 663 725	656 724 791	705 781 857	754 838 923		
26	351	450 488 526 566 607	575 624 674 726 779	744 804 866	863 933 1,006	955 1, 032 1, 113	1, 220	1, 136 1, 229 1, 329	1, 226 1, 327 1, 438	1, 414 1, 539	
31 32 33 34 35	466 497 530 563 600	694 742 788	953	1, 068 1, 142 1, 216	1, 245 1, 332 1, 419	1, 384 1, 480 1, 576	1, 522 1, 628 1, 734	1, 653 1, 769 1, 886	1, 784 1, 910 2, 037	1, 922 2, 062 2, 202	1, 918 2, 059 2, 214 2, 368 2, 534
36	637 674 712 751 790	948 1, 002 1, 058	1, 223 1, 292 1, 366	1, 472 1, 558 1, 647	1, 721 1, 824 1, 928	1, 915 2, 029 2, 148	2, 109 2, 234 3, 368	2, 302 2, 442 2, 582	2, 494 2, 649 2, 796	2, 684 2, 849 3, 010	2, 700 2, 874 3, 049 3, 224 3, 399

Table 25.—Gross volume of tree, International 1/4-inch rule

											-
Tree diam- eter		VOI					BY N OT L		ER	OF	
(inches)	1	11/2	2	$2\frac{1}{2}$	3	31/2	4	41/2	5	51/2	6
10	41 52 62 75 88 102	54 68 82 100 119 138	67 85 103 126 150 175	76 98 119 146 174 204	85 110 135 167 199 234	145 180 215 255	155 193 231 276				
16 17 18 19 20	117 135 153 172 190	158 184 209 235 261	200 232 265 298 332	235 273 312 352 392	270 314 359 406 453	296 345 394 446 498	486				
21 22 23 24 25	211 232 256 281 306	290 320 354 389 424	370 408 452 497 542	438 482 536 590 644	505 557 620 683 747	556 616 684 752 826	674 748 822	652 725 808 890 980	868 959		
26 27 28 29 30	331 360 388 418 447	460 500 540 582 624	588 640 693 747 801	700 763 827 892 956	886 961 1, 036	982 1, 064 1, 147	987 1, 077 1, 167 1, 258 1, 350	1, 169 1, 269 1, 371	1, 261 1, 371 1, 484	1, 461 1, 588	1, 551 1, 691
31	478 509 544 580 616	668 712 762 813 865	915 980 1,046	1,096 1,176 1,256	1, 278 1, 372 1, 465	1, 420 1, 525 1, 630	1, 456 1, 563 1, 678 1, 794 1, 914	1, 698 1, 825 1, 952	1, 834 1, 972 2, 110	1, 976 2, 129 2, 281	2, 119 2, 286 2, 452
36	770	973 1, 030	1, 255 1, 329 1, 404	1, 511 1, 603 1, 693	1, 767 1, 877 1, 982	1, 968 2, 090 2, 210	2, 438	2, 366 2, 516 2, 660	2, 563 2, 730 2, 881	2, 760 2, 938 3, 102	2, 958 3, 146 3, 323

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Table 26.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VOI	LUM	E (bo USAE	ard fo	eet) E 6-FO	BY N OT I	UME OGS	ER	OF	
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
101 111 121 131 141	42 54 65 78 90 106	56 71 86 104 122 143	69 88 108 130 153 180	78 102 125 152 178 211	88 115 142 173 204 242	153 187 221 264	164 201 238 286				
16 17 18 19 20	121 138 155 175 195	164 188 212 240 268	208 238 269 305 341	244 280 316 360 403	280 322 364 414 465	308 354 400 456 512	335 386 437 498 560				
21 22 23 24 25	218 240 264 287 314	300 332 365 398 436	382 423 466 508 558	452 501 553 604 664	522 579 640 700 769	576 640 706 771 850	772 842	676 755 834 912 1,010	808 895 982		
26. 27. 28. 29. 30.	341 368 395 426 458	474 512 550 595 640	607 656 706 764 822	722 782 843 912 982	909	1, 008 1, 086 1, 176	1, 021 1, 106 1, 192 1, 290 1, 388	1, 201 1, 296 1, 406	1, 296 1, 401 1, 522	1, 493 1, 629	1, 585 1, 736
31	492 526 560 593 631	832	947 1,009 1,071	1, 136 1, 210 1, 286	1, 233 1, 324 1, 412 1, 501 1, 604	1, 472 1, 571 1, 670	1, 620 1, 730 1, 839	1, 762 1, 882 2, 002	1, 903 2, 034 2, 164	2, 051 2, 196 2, 340	2, 199 2, 358 2, 516
36	669 707 745 788 831	942 996 1, 050 1, 113 1, 175	1, 286 1, 356	1, 549 1, 637	1, 707 1, 812 1, 918 2, 032 2, 145	2, 018	2, 224	2, 428 2, 572	2, 633	2, 836	3, 039

Table 27.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VO:	LUM	E (bo	ard f	eet) I .6-FO	BY N OT I	UME OGS	BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	43 54 66 80 93 108	57 72 88 108 126 146	71 91 111 135 159 185	81 104 128 156 186 217	91 118 145 178 212 249	156 193 230 272	168 208 248 295				
16 17 18 19 20	123 142 160 180 200	167 193 218 247 276	211 244 277 314 351	248 288 327 371 415	286 332 377 428 479	314 365 415 471 528	342 398 453 524 576				
21 22 23 24 25	223 246 271 296 322	308 340 376 410 447	392 434 480 525 572	464 514 570 624 681	537 595 660 724 790	798	873	862 946	830 925 1,020		
26 27 28 29 30	347 376 406 438 470	566 612	619 673 727 786 844	737 802 868 939 1, 008	932	1,034 1,120	1, 136 1, 230	1, 234 1, 338	1, 331 1, 445	1, 540 1, 680 1, 818	1, 636
31	504 538 574 611 647	754 806 858	970 1, 037 1, 104	1, 164 1, 245 1, 326	1, 357 1, 453 1, 549	1,510 1,618 1,725	1, 664 1, 782 1, 901	1, 808 1, 939 2, 070	1, 953 2, 096 2, 240	1, 962 2, 106 2, 264 2, 422 2, 576	2, 259 2, 431 2, 603
36	808	1, 021 1, 079 1, 142	1,318 1,393 1,476	1, 588 1, 682 1, 782	1, 859 1, 972 2, 088	2, 072 2, 197 2, 329	2, 284 2, 422 2, 570	2, 495 2, 650 2, 806	2, 706 2, 877 3, 042	2, 732 2, 914 3, 097 3, 277 3, 457	3, 123 3, 317 3, 512

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Table 28.—Gross volume of tree, International 1/4-inch rule

		77.0		- A	7 /		DAT 31		777	0.77	
Tree diam-		VO	LUM	USA1	oard 1	eet) 1 16-F0	BY N OT I	LOGS	BER	OF.	
eter (inches)	1	1½	2	2½	3	3½	4	4½	5	5½	6
10	45 56	60 75	74 94	84 108	94 122				l.		
12	68 82	91 110	114 138	132 161	150 184	162 199	173 214				
14	95 111	129 151	163 191	190 224	217 257	236 280	304				
16 17	127 146	173 199	219 252	258 297	297 342	326 377	355 412				
18 19 20	164 184 205	224 253 282	285 322 360	336 381 426	388 440 492	428 486 543	468 531 594				
21	228	315	402	476	550	608	667	716	765		
22 23 24	251 276 302	348 383 420	444 490 537	526 582 639	609 675 741	674 746 818	740 818 895	796 884 971			
25	330	459	588	700	812	899	986	1, 070	1, 153		
26 27	357 387 417	498 540 582	638 693 748	760 827	961	1,066	1,076	1,273	1,374		
28	448 481	628 674	807	964	1,122	1, 245	1, 267 1, 368 1, 469	1,492	1,616	1,730	1,844
31	516 550	723 772		1, 114 1, 192	1, 298 1, 391	1, 443 1, 548	1, 588 1, 706	1, 731 1, 856	1, 874 2, 006	2, 017 2, 164	2, 160 2, 321
33	587 624	824 876	1,061 1,129	1, 274 1, 358	1, 488 1, 586	1,658 1,767	1,827 1,948	1, 988 2, 121	$\begin{vmatrix} 2, 150 \\ 2, 294 \end{vmatrix}$	$\begin{vmatrix} 2,322\\ 2,482 \end{vmatrix}$	2, 495 2, 669
35	663 702			· .	1	ĺ .	2, 080 2, 212	'	1	1	1
37	744 785	1,050 1,108	1, 355	1,634 1,730	1, 912	2, 132	2, 352 2, 493	2, 570 2, 728	2, 788 2, 962	3,004	3, 219
39 40	828 872	1, 172 1, 235	1, 515 1, 598	1, 830 1, 929	2, 144 2, 260	2, 394 2, 528	2, 644 2, 795	2, 887 3, 046	3, 130 3, 298	3, 372 3, 556	3, 614 3, 813

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Table 29.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		vo			oard f					OF	
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	46 58 69 83 97 114	61 77 92 112 132 155	76 96 116 141 166 196	86 110 134 164 194 230	97 125 153 188 222 264	165 203 241 289	177				
16	131 150 169 190 211	178 205 232 261 291	226 260 294 332 371	266 307 348 393 439	307 354 401 454 507	338 390 442 501 560	369 426 484 548 613				
21 22 23 24 25	234 257 282 308 338	324 356 392 428 470	413 455 502 548 602	490 540 596 652 718	566 625 691 757 833	626 692 764 836 924	686 760 838 916 1, 014	736 818 906 994 1, 10°	876 974 1, 071		
26 27 28 29 30	367 398 428 460 493	512 556 598 644 690	657 713 769 828 888	991	909 990 1, 070 1, 154 1, 237	1, 099 1, 188 1, 281	1,408	1, 314 1, 421 1, 536	1, 420 1, 537 1, 664	1, 640 1, 782	1, 743 1, 900
31 32 33 34 35	528 563 600 637 679	843 896	1,086 1,154	1,305 1,388	1, 331 1, 425 1, 524 1, 622 1, 736	1,698 1,808	1, 873 1, 995	2, 040 2, 173	2, 206 2, 351	2, 383 2, 544	2, 560 2, 737
36 37 38 39 40	763 805 850	1, 078 1, 138	1, 392 1, 470 1, 554	1, 679 1, 776 1, 878	1, 850 1, 966 2, 083 2, 202 2, 321	2, 194 2, 324 2, 460	2, 422 2, 564 2, 718	2, 647 2, 806 2, 969	2, 872 3, 049 3, 220	3, 095 3, 284 3, 470	3, 318 3, 518 3, 719

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Table 30.—Gross volume of tree, International 1/4-inch rule

Tree diam-		VO					BY N			OF	
eter (inches)	1	11/2	2	21/2	3	31.2	4	41/2	5	51/2	6
10 11 12 13 14 15	47 59 71 86 100 116	62 78 95 116 136 158	78 98 119 146 172 201	89 113 138 170 202 236	100 128 157 194 231 272	170 210 251 298	227 271				
16	133 153 173 194 216	182 210 238 268 298	230 266 302 341 380	271 314 358 404 450	312 362 413 466 520		438 499 564				
21 22 23 24 25	240 263 290 318 346	332 364 403 442 482	466 516 567	502 553 614 676 737	580 640 712 784 856	710 788 866	779 864 949	840 935 1, 030	901 1,006 1,111		
26 27 28 29 30	374 406 439 472 505	522 568 614 661 708	730 790 850	872 945 1, 018	1, 014 1, 100 1, 185	1, 126 1, 222 1, 316	1, 135 1, 239 1, 343 1, 448 1, 552	1, 348 1, 462 1, 580	1, 456 1, 582 1, 712	1, 689 1, 834	1, 796 1, 957
31	540 576 616 656 696	923	1, 042 1, 116 1, 190	1, 252 1, 342 1, 432	1, 461 1, 567 1, 673	1, 628 1, 748 1, 866	12.060	1, 956 2, 100 2, 245	2, 115 2, 272 2, 430	2, 282 2, 455 2, 629	2, 449 2, 638
36	781	1, 104	1.426	1,720	2.015	2. 250	2.484	2.716	2.948	3, 177	3, 190 3, 406 3, 621 3, 824 4, 028

Table 31.—Gross volume of tree, International 1/4-inch rule

Tree		VO	T TIM	F (b	oord t	oot)	BY N	TTM	DED	OF	
diam- eter		V 0					OT I			Or	
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10	48	64	80	92	103						
11	61 74	82 100	102 125	118 145	134 165	179	193				
13 14	88 102	119 139	150 176	176 206	200 235	218 256	235				
15	120	164	207	244	280	307	334				
16	138	188	238	281	324	358					
17 18	157 176	214 242	272 307	322 364	372 420	411 464	450 508				
19 20	198 221	273 306	348 390	413 462	478 535	528 591	578 647				
									1		
21	246 272	341 378	436 483	518 574	600 664	664 737					
23	298 324	414 451	530 578	631 690	732 801	811 886	890				
24 25	354	494	634	756	879						
26	385	538	690		957	1,064	1, 172	1, 274	1, 375		
27	416 447	582 626	747 804	893 962	1, 039 1, 121	1,155 1.246	1, 271 1, 370	$\begin{bmatrix} 1,383 \\ 1.492 \end{bmatrix}$	1, 495 1, 615	1, 724	1. 833
29	482	676	869	1.040	1, 212	1.347	1,482	1,618	1,754	1,879	2,004
30	517	726	1						-	2, 034	
3132	555 593	780 834	1,004	1, 205	1,406	1,566	1,726	1,883	2, 040 2, 187	2, 197 2, 360	2, 354
33	631	888	1, 144	1,377	1,610	1,796	1,982	2, 160	2, 338	2, 526	2,714
34	$\frac{669}{712}$	1,004	1, 215 1, 297	$\begin{bmatrix} 1,463 \\ 1,562 \end{bmatrix}$	1, 711 1, 828	1, 909 2, 041	2, 107 2, 254	2, 298 2, 460	2, 488 2, 665	2, 692 2, 879	2, 897
36	755	1,067	1, 379	1, 662	1, 945	2, 172	2, 400	2, 621	2, 842	3, 066	3, 289
37 38	798	1,128	1,458	1,761	2,064	2, 305	2, 546	2, 784	3, 023	3, 258	3, 494
39	889	1, 190 1, 260	1, 630	1, 971	2, 312	2, 585	2, 858	3, 124	3, 390	3, 655	3, 920
40	937	1, 330	1,722	2, 081	2, 440	2, 732	3, 025	3, 301	3, 577	3, 858	4, 140

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Table 32.—Gross volume of tree, International 1/4-inch rule

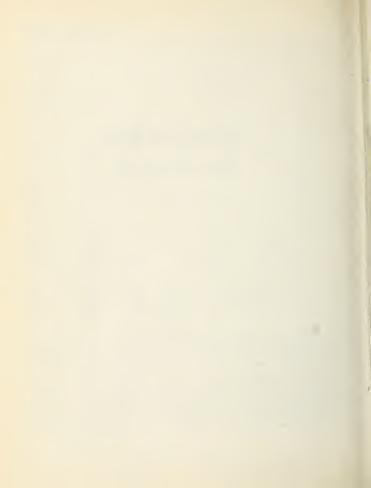
Tree diam- eter		VO			oard f					OF	
(inches)	1	1½	2	2½	3	3½	4	$4\frac{1}{2}$	5	5½	6
10 11 12 13 14 15	50 62 75 90 106 123	66 84 101 122 144 168	83 105 127 155 183 212	95 122 148 182 214 250	138 169	183 226 268 316	197 243 289				
16 17 18 19 20	140 160 181 204 227	191 220 249 281 314	242 280 317 358 400	286 331 375 425 475	330 382 433 492 550	364 421 478 543 608	397 460 524 594 665				
21	252 278 306 334 363	350 386 426 466 506	447 494 546 597 650	532 588 650 712 776	616 681 754 828 902	682 755 836 916 1,002	747 829 917 1,005 1,101	894 992 1, 091	960 1,068 1,177		
26	392 425 458 494 530	548 594 642 693 744	703 764 825 892 958	914 988 1, 068	976 1, 064 1, 151 1, 244 1, 338	1, 184 1, 280 1, 384	1, 304 1, 410 1, 524	1, 418 1, 536 1, 664	1, 533 1, 662 1, 804	1, 775 1, 933	1, 888 2, 062
31	568 606 647 688 729	852 911 970	1,099 1,175 1,251	1, 322 1, 414 1, 506	1, 441 1, 544 1, 653 1, 762 1, 874	1, 723 1, 846 1, 968	1, 902 2, 038 2, 173	2, 073 2, 222 2, 370	2, 244 2, 406 2, 568	2, 421 2, 600 2, 779	2, 598 2, 794 2, 990
36 37 38 39 40	816 862 910	1, 154 1, 220 1, 290	1, 492 1, 578 1, 671	1,802 1,910 2,022	1, 985 2, 113 2, 241 2, 372 2, 502	2, 361 2, 504 2, 654	2, 609 2, 766 2, 935	2, 854 3, 030 3, 210	3, 100 3, 294 3, 484	3, 342 3, 550 3, 756	3, 584 3, 805 4, 028

Table 33.—Gross volume of tree, International 1/4-inch rule

Tree diam- eter		VO					BY N OT I		BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	51 64 77 92 108 126	68 86 104 125 147 172	85 108 131 158 186 218	98 125 152 185 218 257	110 142 174 212 250 296	188 230 273 325	202				
16 17 18 19 20	144 164 185 208 232		250 288 325 368 410	296 340 385 436 487	341 393 445 504 564	376 434 492 558 624	475 539 612				
21 22 23 24 25	284 312 341	394	505 558 610		697 772 846	774 855 936	850	917 1, 016 1, 116	984 1, 094 1, 204		
26 27 28 30	436 470 506	611 659 710	786 848 914	940 1,016 1,096	1, 095 1, 184 1, 278	1, 218 1, 317 1, 422	1, 235 1, 342 1, 450 1, 566 1, 681	1, 461 1, 580 1, 710	1, 580 1, 711 1, 854	1, 828 1, 988	1, 945 2, 122
31 32 33 34 35	581 620 661 702 746	817 872 932 990 1, 054	1, 053 1, 125 1, 202 1, 278 1, 362	1, 264 1, 354 1, 447 1, 540 1, 642	1, 476 1, 582 1, 692 1, 801 1, 921	1, 646 1, 766 1, 889 2, 012 2, 147	1, 816 1, 950 2, 086 2, 223 2, 373	1, 982 2, 124 2, 275 2, 426 2, 592	2, 148 2, 299 2, 464 2, 628 2, 810	2, 315 2, 482 2, 664 2, 845 3, 037	2, 482 2, 665 2, 864 3, 062 3, 264
36	836 883 932	1, 184 1, 251 1, 322	1, 532 1, 619 1, 713	1, 851 1, 960 2, 072	2, 170 2, 300 2, 432	2, 426 2, 570 2, 722	2, 523 2, 682 2, 841 3, 012 3, 184	2, 935 3, 113 3, 294	3, 188 3, 385 3, 577	3, 438 3, 649 3, 858	3, 689 3, 913 4, 138

Scribner Log Rule

(Form Class 65-90)



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Table 34.—Gross volume of tree, Scribner log rule

Tree diam- eter		VO:	LUM	E (be	oard f	eet) I 16-FO	BY N OT I	IUMI LOGS	BER	OF	
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10	16 22 28 36 43 52	19 27 35 45 55 67	22 32 42 54 67 82	46 60 75 93	50 66 83 104						
16 17 18 19 20	61 71 81 92 104	79 92 106 122 138	97 114 132 152 173	111 131 151 175 200	125 148 170 198 226	133 158 183 213 243	141 168 196 228 260	 273			
21 22 23 24 25	116 129 143 157 172	156 173 192 212 233	195 217 242 267 294	226 252 282 312 344	256 287 322 356 393	276 310 348 384 426	297 334 373 412 460	314 354 398 442 492	330 375 424 472 525		
26 27 28 29 30	187 204 221 239 257	254 277 300 326 350	320 350 380 412 444	375 411 446 484 522	430 472 513 557 601	468 514 559 606 654	507 556 605 656 708	542 596 650 708 766	578 637 696 760 825	737 808 880	778 857 936
31	276 296 316 337 360	378 405 434 462 495	479 514 551 588 630	565 608 652 696 747	651 701 753 805 864	711 768 826 883 948	771 834 898 961 1, 032		962 1,036 1,110	1, 033 1, 114 1, 196	1, 193 1, 282
36 37 38 39 40	382 406 429 454 478	527 560 592 628 664	672 714 756 803 850	958	922 986 1, 049 1, 113 1, 177	1, 082 1, 151 1, 224	1, 178 1, 253 1, 334	1, 443	1,372 1,464 1,552	1, 470 1, 568 1, 663	1, 568 1, 672 1, 774

Table 35.—Gross volume of tree, Scribner log rule

Tree diam- eter		vo					BY N OT I			OF	
(inches)	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	17 23 29 37 45 54	20 28 36 47 58 70	24 34 44 57 70 86	48 64 78 98	52 70 87 109						
16 17 18 19 20	64 74 84 96 108	83 97 111 128 144	102 120 138 159 180	116 138 159 184 208	131 156 180 208 236	140 167 194 224 254	149 178 207 240 272				
21 22 23 24 25	120 133 147 161 178	161 178 198 218 241	202 224 249 274 304	234 261 290 320 356	267 298 332 367 408	288 323 360 396 443	310 348 387 426 478	327 368 412 456 512	344 388 438 487 546		
26 27 28 29 30	194 212 229 248 266	264 288 312 338 363	334 364 395 428 460	391 428 464 504 542	448 491 534 579 624	489 536 582 632 681	530 580 630 684 738	568 623 678 738 798	606 666 727 793 859	770 844 918	
31 32 33 34 35	286 305 326 348 372	391 418 448 478 513	496 532 570 608 654	585 628 674 720 775	674 725 779 833 896	738 795 854 914 985	865 930	932 1,003 1,074	1,000 1,076 1,152	1,072 1,156 1,240	1, 236 1, 329
36	397 420 444 469 494	548 581 614 650 687	699 742 784 832 880	937 993	1,025 1,090 1,154	1, 126 1, 196 1, 270	1, 151 1, 227 1, 303 1, 386 1, 470	1, 328 1, 414 1, 500	1, 430 1, 525 1, 614	1,534 1,634 1,730	1, 637 1, 742 1, 847

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Table 36.—Gross volume of tree, Scribner log rule

Tree VOLUME (board feet) BY NUMBER OF											
Tree diam- eter		VO	LUM	E (be USAI	oard i	leet) 16-F0	OT I	LOGS	BER	OF	
(inches)	1	11/2	2	2½	3	31/2	4	41/2	5	51/2	6
10	18 24	22 30	26 36								
11	30	38	46	50	55						
13	38	49	60	67	74						
14	47	60	74	84	93						
15	56	73	90	102	114						
16	66	86	105	120	136	145	154				
17	77 88	100 116	124 144	143 166	162 189	174 204	186 218				
18 19	100	132	165	190	216	233	250				
20	111	148	186	215	244	264	283	298	314		
01	104	100	000	040	077.0	2000	200	0.40	0.50		
21	124 137	166 184	209 232	242 270	276 308	299 334	322 361	340 382	359 404		
23	152	206	260	303	346	375	404	432	459		
24	168	228	287	336	385	416	448	481	514		
25	184	250	315	370	424	461	498	534	570		
26	199	271	343	402	462	504	547	586	625		
27	218	297	376	442	508	555	602	647	692		
28	237	324	410	482	555	606	657	708	758		
29	256	350	444	523	602	657	712	769	826		
30	275	376	477	562	648	708	768	832	895	956	1, 017
31	294	403	512	606	699	766	832	899		1,034	1, 102
32	314	431	548	649	750			966	1,036	1, 112	1, 188
33	338	464	590		810		968	1,044	1, 120	1, 205	1, 290
34	361 384	497 530	633 675	752 802	870	955	1,040	1, 122	1, 204	1,298	1, 393
35	384	330	0/0	802	929	1, 021	1, 113	1, 202	1, 291	1, 388	1, 486
36	406	562	717			1,087	1, 186	1, 282	1,378	1, 479	1,580
37	433	600	766	913	1,060	1, 166	1, 271	1,377	1,483	1,590	1,698
38	460	637	814								1, 815
39 40		674 710									1, 920 2, 026
±0	1 010	110	910	1, 080	1, 203	1, 595	1, 523	1, 047	1, 111	1, 898	2, 020

Table 37.—Gross volume of tree, Scribner log rule

Tree diam- eter		VO:					OT I		BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	41/2	5	51/2	6
10	19 26 32 40 48 58	23 32 40 51 62 76	27 38 49 62 76 94	54 70 86 106	60 78 95 119						
16	69 80 90 102 115	90 105 119 136 154	111 130 148 170 193	127 149 170 197 224	143 168 193 224 254	153 181 209 242 275	163 194 225 260 296				
21 22 23 24 25	130 144 158 173 190	174 194 214 234 258	219 245 270 296 326	254 286 316 346 382	290 326 362 397 439	314 354 393 431 479	339 382 424 465 519	359 406 452 498 556	379 430 480 531 594		
26 27 28 29 30	207 225 243 264 284	282 306 332 360 389	357 388 420 457 494	419 456 494 538 583	481 525 569 620 672	527 574 622 678 734	573 624 676 736 797	614 672 729 796 863	656 719 782 856 929	829 912	
31	306 327 350 372 397	420 450 481 512 548	533 572 612 653 699	630 678 726 776 832	728 784 841 898 964	986		1, 013 1, 086 1, 160	1, 087 1, 166 1, 246	1,344	1, 246 1, 344 1, 442
36	422 447 472 499 526	584 619 654 694 733	745 791 837 888 940	944	1,098 1,165	1, 207 1, 280	1, 237 1, 316 1, 396 1, 488 1, 580	1, 427 1, 516	1, 538 1, 636	1, 649 1, 753	1, 760 1, 870

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Table 38.—Gross volume of tree, Scribner log rule

Tree diam-		vo					BY N OT I			OF	
eter (inches)	1	1½	2	21/2	3	3½	4	$4\frac{1}{2}$	5	5½	6
10	20 26 33 42 51 60	24 33 42 54 66 78	29 40 51 66 81 97	57 74 92 110	63 82 102 124	108					
16 17 18 19 20	70 82 93 106 119	92 108 124 142 160	113 134 154 177 200	130 154 178 206 232	146 174 202 234 265	156 188 218 253 288	167 201 235 272 308		343		
21 22 23 24 25	134 148 164 180 196	108 200 222 244 267	226 252 280 309 338	263 294 328 363 397	300 336 376 417 456	326 366 409 452 498	352 396 442 488 539	373 420 472 524 578	394 445 502 559 618		
26 27 28 29 30	213 232 251 272 293	290 317 344 373 402	368 402 436 474 511	432 473 514 559 603	496 544 592 644 695	543 595 648 704 760	590 646 703 764 826	634 696 759 828 896	891	864	914 1, 008
31	315 337 362 386 409	433 464 498 532 566	551 591 635 679 722	652 701 754 806 859	753 811 872 934 996	892 960 1, 028		1,050 1,131 1,212	1,302	1, 210 1, 307 1, 405	1, 292 1, 400 1, 508
3637 38 39 40	432 459 486 514 542	599 638 676 7 16 7 56	766 816 865 918 971	974 1.034	1, 131 1, 203	1, 246 1, 325	1, 273 1, 360 1, 447 1, 542 1, 638	1, 476 1, 573	1, 592 1, 699	1,708 1,822	1,824 1,945

Table 39.—Gross volume of tree, Scribner log rule

Tree diam- eter		VO	LUM	E (be USAI	oard f	eet)] [6-F0	BY N OT I	UMI	BER	OF	
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10 11 12	21 28 34	26 35 44	31 42 53	60	66						
13 14 15	43 52 63	56 68 82	68 83 102	77 94 116	86 105 130	111 139	117 148				
16	74 86	97 113	120 140	138 162	155 184	166 198	178 212				
18 19 20	97 110 123	129 147 165	161 184 207	186 214 241	212 244 275	229 264 298	246 284 321	339			
21	138 153	186 207	234 261	273 304	312 348	339 379	366 410	388 436	410 463		
23 24 25	169 185 203	230 252 276	290 318 350	340 374 412	389 430 474	423 467 517	457 504 560	488 540 601	520 577 64 2		
26 27 28 29 30	221 240 260 281 302	302 328 356 386 416	382 416 451 490 529		517 566 615 668 720		674 734 796	661 726 792 861 930	707 778 849 926 1,004	900	1,046
31	325 348 372 397 422	448 480 514 548 585		725 778 831	901 963	924 992 1,061	932 1, 008 1, 084 1, 159 1, 242	1, 088 1, 170 1, 252	1, 167 1, 256 1, 346	1,452	1, 340 1, 449 1, 558
36 37 38 39 40	448 475 502 530 559	622 660 699 740 781	846 896	1,010 1,072	1, 174 1, 247	1, 294	1.502	1, 535 1, 634	1, 656 1, 766	1,776 1,893	1,896

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Table 40.—Gross volume of tree, Scribner log rule

Tree diam-		vo	LUM	E (bo	oard f	eet) I 16-FO	OT I	UMI OGS	BER	OF	
eter (inches)	1	1½	2	2½	3	3½	4	$4\frac{1}{2}$	5	5½	6
10 11 12 13 14 15	22 29 36 45 54 66	27 36 46 58 70 86	32 44 56 71 86 106	62 80 98 121	69		122 155				
16	77 89 101 114 127	101 118 134 153 171	125 146 168 192 215	144 169 195 223 250	163 192 222 254 286	176 207 240 275 310	188 222 257 296 335				
21 22 23 24 25	142 157 173 189 209	192 212 235 258 286	242 268 297 326 362	282 314 348 384 426	322 359 400 441 490	351 392 436 480 535	380 425 472 520 580	403 452 505 558 624	480 538		
26	229 249 269 290 311	313 340 368 398 428	397 432 468 506 545		538 589 640 692 744	590 646 702 758 816	641 702 763 825 887	690 757 824 894 964	812 884 962		991 1, 089
31	334 358 382 406 435	461 494 528 562 603	588 630 674 717 771	697 748 802 854 919	991	954 1, 024 1, 092	964 1, 042 1, 118 1, 193 1, 286	1, 124 1, 208 1, 290	1, 207 1, 298 1, 388	1, 398 1, 498	1, 388 1, 498 1, 607
36	464 491 518 546 575	644 682 721 763 805	924 980	1, 046 1, 108 1, 174	1, 217 1, 291 1, 367	1, 342 1, 424 1, 512	1, 379 1, 468 1, 558 1, 656 1, 754	1, 594 1, 696 1, 796	1, 720 1, 833 1, 937	1, 846 1, 965 2, 080	1, 973 2, 097 2, 222

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Table 41.—Gross volume of tree, Scribner log rule

Tree		VO	LUM	E (b	nard 1	oot) 1	RV N	TINE	SED	OF	
diam-		V 0					OT I			Or	
eter (inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10	23 30 37 46 56	28 38 48 60 73	34 46 58 74 90	65 84 103	72 94 116		120				
15	67	88	109	125	141	151	161				
16 17 18 19 20	78 91 104 118 131	103 121 139 158 176	128 151 174 198 222	147 174 202 231 260	166 198 231 264 297	180 214 250 286 322	193 230 268 308 348				
21 22 23 24 25	146 161 178 196 215	198 218 243 268 294	249 276 308 340 374	292 323 362 400 440	334 370 416 461 506	364 404 453 502 554	394 439 490 542 601	418 468 525 584 646	442 496 560 625 692		
26 27 28 29 30	234 256 278 299 320	320 351 382 412 442	407 446 485 524 563	480 528 574 620 666	552 608 663 716 769	606 667 727 786 844	660 726 791 855 919	710 783 855 928 1,000	840 919 1, 000		1, 032 1, 130
31 32 33 34 35	344 368 395 422 448	475 508 546 584 622	606 649 697 745 796	719 772 830 889 950	894 964 1,033	1,062 1,139	997 1,075 1,160 1,245 1,330	1, 162 1, 254 1, 347	1, 249 1, 349 1, 449	1, 454 1, 564	1, 437 1, 558 1, 678
36 37 38 39 40	475 504 534 563 592	661 703 745 788 830	902	1,079 1,146 1,213	1, 256 1, 337 1, 414	1, 386 1, 476 1, 564	1, 416 1, 516 1, 616 1, 714 1, 812	1, 647 1, 758 1, 860	1,778 1,899 2,006	1, 908 2, 037 2, 154	2, 039 2, 175 2, 302

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Table 42.—Gross volume of tree, Scribner log rule

Tree diam- eter		VOL					Y N' OT I		ER (F	
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10 11 12 13 14 15	24 32 39 48 58 70	30 40 50 63 76 92	36 49 62 78 94 114	69 88 107 131	76		134 169				
16 17 18 19 20	81 94 106 120 135	107 125 142 162 182	133 156 178 204 230	154 180 206 238 268	175 205 235 271 307	190 222 254 294 334	204 239 274 318 362				
21	152 168 185 202 222	206 228 252 276 304	260 289 320 350 386	304 338 376 412 455	348 388 431 474 524	380 425 472 518 574	412 462 512 561 624	437 492 548 603 672	523 584 645		
26	243 264 284 307 330	333 362 390 423 456	423 460 497 539 581	498 543 588 638 688	574 626 679 737 795	631 688 745 810 874	882		868 942 1,030	1, 001 1, 099 1, 196	1,060 1,168
31 32 33 34 35	407 432		628 675 720 766 821	745 802 858 914 980	930 996 1, 062	1, 026 1, 098 1, 172	1, 201 1, 281	1, 212 1, 300 1, 388	1, 304 1, 399 1, 494	1, 404 1, 508 1, 613	1,503
36	546	722 762 809	927 978 1,040	1, 110 1, 174 1, 248	1, 292 1, 371 1, 455	1, 428 1, 515 1, 611	1, 565 1, 659 1, 767	1,700 1,804 1,918	1, 835 1, 949 2, 069	1, 972 2, 092 2, 222	1, 980 2, 108 2, 236 2, 375 2, 514

Table 43.—Gross volume of tree, Scribner log rule

Tree	VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS										
diam- eter				USAE	3LE	16-F.O	OT 1	JOGS			
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10	24	30	36								
11	32	41	50								
12	41	53	65	72	80						
13	51	66	82	93	104	===					
14	61 72	80	99	113	127	135	143				
15	12	95	118	136	154	165	176				
16	83	110	137	158	180	194	209				
17	96	128	161	186	212	230					
18	110	148	185	215	245	266	287				
19	125	168	212	247	282	307	332				
20	140	190	239	280	320	348	376	398	420		
21	156	212	268	314	360	394	427	454	480		
22	173	236	298	350	401	440		510	541		
23	192	262	332	390	448	490	532	570			
24	210	288	365	430	495	540		631	676		
25	229	314	399	470	542	594	646	696	746		
26	248	340	433	510	588	648	707	762	817		
27	270	372	474	560	646	710		836	898		
28	293	404	514	608	703	772	841	910	979	1, 041	1, 103
29	316	436	557	660	762	838			1,069	1, 140	1, 212
30	340	470	600	711	822	904	987	1, 073	1, 159	1, 240	1, 321
31	367	508	648	770	891	982	1, 074	1. 164	1, 254	1. 346	1. 438
32	394	545	696	828	960	1,060	1, 160 1, 246	1, 255	1, 350	1, 452	1,554
33	421	584	746	889	1,032	1, 139	1, 246	1,350	1,453	1, 566	1,678
34	448	622	796	950	1, 104	1,218	1,333	1,444	1,556	[1,679]	1,802
35	475	662	848	1, 012	1, 176	1, 299	1, 422	1, 543	1, 664	1, 792	1, 919
36	502	700	899	1. 073	1. 247	1.379	1, 511	1.642	1. 772	1.904	2 036
37	532	744					1, 614				
38	563	787	1,011	1, 214	1,416	1,566	1,717	1,868	2,020	2, 170	2, 319
39	596	834	1,073	1.288	1.502	1.664	1.826	1.984	2.142	2, 303	2, 460
40	629	882	1, 135	1,362	1, 589	1, 762	1, 935	2, 099	2, 263	2, 432	2, 601

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Table 44.—Gross volume of tree, Scribner log rule

Tree diam- eter	7	OLU	ME US	(boar ABL	d feet E 16-1	BY FOOT	NUI LO	MBE GS	R OF	1	
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	4½	5	5½	6
10 11 12 13	25 34 42 52	32 43 54 68	38 52 66 84	74 96	83 107						
14	63 74	82 98	102 122	116 141	131 160	140 172	148 184				
16 17 18 19	86 100 113 128 144	114 133 152 173 195	142 166 191 218 246	165 193 222 255 288	188 220 253 292 331	204 240 276 318 360	220 260 299 344 389				
20 21 22 23 24	160 177 196 216	218 242 268 296	276 306 340 375	324 360 401 442	372 413 462 510	406 453 505 556	441 493 548 603	470 526 588 650	498 560 629 698		
25 26 27	236 257 280	324 352 385	412 448 490	486 530 580	560 611 669	615 674 736	736 804	722 794 869	774 851 934		
28 29 30	302 326 351	416 451 486	531 576 620	629 682 736	727 789 851		946 1,021	1, 027 1, 110	1,017 1,108 1,199	1, 183 1, 286	1, 258 1, 373
31	377 403 432 460 489	522 558 599 639 681	667 714 766 818 873	976	988 1, 062 1, 135	1,092 1,174 1,255	1, 195 1, 285 1, 375	1, 294 1, 391 1, 488	1, 296 1, 392 1, 497 1, 602 1, 720	1, 497 1, 614 1, 730	1, 602 1, 730 1, 859
36	518 548 579 613 647	723 767 811 860 908	986	1, 182	1.377	1.524	1,671	1,818	1, 839 1, 965 2, 091 2, 214 2, 337	2, 112	2. 258

Table 45.—Gross volume of tree, Scribner log rule

Tree diam- eter		VO:	LUM				BY N OT I			OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	41/2	5	$5\frac{1}{2}$	6
10 11 12 13 14 15	26 34 43 54 64 77	33 44 56 70 84 102	40 54 68 86 105 128	44 60 77 98 120 147	48 67 86 110 135 166		152 192				
16	90 104 117 132 148	120 139 158 179 201	150 174 198 226 254	174 203 232 264 298	198 232 265 303 341	214 252 288 330 372	231 272 312 358 403				
21 22 23 24 25	165 182 202 221 244	224 248 276 303 334	284 315 350 385 425	334 370 412 454 502	384 426 474 523 580	420 468 519 572 636	456 509 564 620 693	486 544 606 668 747	515 578 647 716 801		
26	266 288 311 336 361	366 397 430 465 500	465 506 548 594 639	550 600 650 704 758	636 694 752 815 878	701 764 828 896 966	766 834 903 978 1, C54	902 979 1, 062	970 1, 055 1, 147	1, 122 1, 226	1,304
31 32 33 34 35	388 414 443 472 503	537 574 615 656 702	686 734 787 840 900	876 940 1,004	1, 018 1, 093 1, 168	1, 125 1, 208 1, 290	1, 143 1, 232 1, 322 1, 413 1, 520	1, 334 1, 434 1, 533	1, 437 1, 545 1, 653	1, 546 1, 665 1, 784	1, 655 1, 785 1, 915
36	534 566 597 631 665	836 885	960 1, 018 1, 075 1, 139 1, 203	1, 221 1, 292 1, 369	1, 424 1, 510 1, 599	1, 577 1, 672 1, 774	1,835	1,882 2,000 2,120	2, 035 2, 166 2, 291	2, 186 2, 326 2, 462	2, 338 2, 485 2, 632

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Table 46.—Gross volume of tree, Scribner log rule

Tree diam-		VO:					BY N OT I			OF	
eter (inches)	1	1½	2	21/2	3	31/2	4	41/2	5	51/2	6
10	27 36 45 56 67 79	34 46 58 73 88 105	42 56 71 90 110 131	46 63 80 103 126 152	49 70 90 116 142 172		161				
16 17 18 19 20	91 106 121 137 153	122 142 163 186 208	152 178 205 234 263	176 208 240 274 308	201 238 275 314 353	218 259 300 343 386	235 280 325 372 418				
21 22 23 24 25	170 187 208 229 250	232 256 285 314 344	294 324 362 400 438	345 382 427 472 518	396 439 492 544 598	434 482 539 596 657		503 561 630 698 772	534 597 673 749 829		
26 27 28 29 30	272 296 320 346 372	374 408 442 479 516	476 520 565 612 659	564 617 671 727 782	651 714 777 842 906	718 787 856 928 998	860 936 1,013	931 1,015 1,100	1,002 1,094 1,188	1, 162 1, 268 1, 374	1, 231 1, 349
31 32 33 34 35	399 426 456 486 516	554 591 634 677 720		970 1,037	1, 049 1, 128 1, 206	1, 160 1, 248 1, 336	1, 271 1, 368 1, 465	1, 377 1, 484 1, 590	1, 483 1, 599 1, 715	1, 485 1, 596 1, 724 1, 852 1, 978	1,709 1,850 1,990
36	546 580 615 649 683	862 911	1,046 1,109 1,173	1, 256 1, 334 1, 410	1, 465 1, 559 1, 648	1, 624 1, 727 1, 830	1,782 1,895 2,011	1, 940 2, 068 2, 190	2, 098 2, 241 2, 368	2, 544	2, 254 2, 413 2, 572 2, 721 2, 870

Table 47.—Gross volume of tree, Scribner log rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	28 38 47 58 69 82	36 49 61 76 92 109	44 60 75 94 114 136	48 67 85 107 130 157	52 74 95 120 146 178	100 128 156 192	106 136				
16 17 18 19 20	95 109 123 140 157	127 146 166 190 214	159 184 209 240 270	185 215 244 281 317	211 246 280 322 364	229 268 306 352 398	247 289 331 382 432		486		
21 22 23 24 25	176 194 214 234 258	240 266 294 322 355	304 338 374 409 452	358 398 441 484 534	411 458 508 558 617	450 504 558 611 678	490 549 607 665 740	523 588 652 718 799	556 626 698 770 858		
26 27 28 29 30	281 304 327 354 382	388 420 452 491 530	494 536 578 628 678	585 636 686 746 806	676 736 795 864 933		886 959 1, 042	959 1, 040 1, 132	945 1,032 1,120 1,222 1,325	1, 190 1, 306	1, 261 1, 389
31 32 33 34 35	411 440 469 498 530	571 612 654 695 742	892	936 1,001 1,066	1,011 1,089 1,164 1,239 1,328	1, 206 1, 289 1, 373	1, 322 1, 414 1, 507	1, 432 1, 534 1, 636	1,543 1,654 1,766	1,661 1,783 1,906	1,779 1,912 2,046
36	563 596 629 666 703	836 882 935	1, 015 1, 075 1, 135 1, 204 1, 274	1, 290 1, 366 1, 449	1,506 1,596 1,694	1,670 1,769 1,881	1,835 1,942 2,068	1, 998 2, 118 2, 251	2, 160 2, 295 2, 434	2, 324 2, 466 2, 616	2, 488 2, 637 2, 799

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Table 48.—Gross volume of tree, Scribner log rule

Tree diam-		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
eter (inches)	1	11/2	2	$2\frac{1}{2}$	3	3½	4	41/2	5	51/2	6
10	29 38 48 60 72 84	37 50 62 79 96 112	45 61 77 98 119 141	50 68 88 112 136 163	55 76 98 126 154 185	104 134 165 200	109 142 176				
16 17 18 19 20	97 112 127 144 161	130 151 172 196 220	163 190 217 248 278	190 222 254 291 327	216 254 291 334 376	234 276 318 365 412	253 299 345 396 447		503		
21 22 23 24 25	180 199 221 243 265	246 273 304 334 365	312 347 386 425 465	368 409 456 503 550	424 471 526 581 636	465 518 578 638 700	506 566 630 694 764	540 606 678 750 826	645 725 805		
26	287 312 337 366 394	396 432 467 507 546	505 551 597 648 699	598 654 710 770 830	691 756 822 892 962	763 835 907 985 1, 062	914 992 1,078	990 1,076 1,172	970 1,065 1,160 1,266 1,371	1, 234 1, 352	1, 307 1, 438
31 32 33 34 35	423 452 483 514 544	588 629 673 717 762	920	964 1,032 1,102	1, 042 1, 121 1, 202 1, 283 1, 367	1, 242 1, 332 1, 423	1, 363 1, 463 1, 563	1,476 1,588 1,698	1, 590 1, 712 1, 833	1,712 1,846 1,980	1, 835 1, 981 2, 127
36	575 611 647 684 722	858 908	1, 104 1, 169	1,326 1,407	1, 451 1, 548 1, 645 1, 744 1, 844	1, 718 1, 826	1,888	2, 056 2, 189	2, 225 2, 371	2, 394	2, 563 2, 725

Table 49.—Gross volume of tree, Scribner log rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
i0	30 40	38 52	47 64	52 72	57 80						
12 13 14	50 62 74	65 82 98	80 101 122	91 116 140	102 130 158	108 139 170	115 148 181				
15	88	117	146	169	192	208					
16 17 18 19	101 116 131 148	136 156 178 202	170 197 224 256	198 230 263 300	226 264 302 345	246 288 330 378	265 312 359 411				
20	166	226	287	338	388	426	463	492	522		
21 22 23 24 25	185 204 226 248 272	254 280 311 342 376	322 357 396 435 479	379 420 468 515 568	436 484 540 595 656	480 534 594 654 722	523 583 648 712 788	558 624 697 770 852	666	1	
26 27 28 29 30	296 322 348 376 403	410 446 482 522 560	523 570 617 667 717	620 677 734 794 854	716 784 851 921 991	1,017	865 946 1,028 1,113 1,198	1, 025 1, 114 1, 210	1, 104 1, 200 1, 306	1,396	1, 357 1, 487
31 32 33 34 35	434 464 495 526 559	604 646 690 735 783	773 829 886 944 1,007	991 1,061	1, 072 1, 153 1, 236 1, 318 1, 408	1, 278 1, 370	1, 402 1, 504	1,520 1,632	1,639 1,761	1,766 1,900	1, 893 2, 038
36 37 38 39 40	592 628 665 703 741	882 934	1, 136 1, 203 1, 275	1, 366 1, 450 1, 536	1, 498 1, 597 1, 696 1, 796 1, 897	1,774 1,883 1,998	1, 950 2, 070 2, 200	2, 126 2, 260 2, 396	2, 302 2, 451 2, 593	2, 475 2, 634 2, 788	2, 648 2, 816 2, 984

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Table 50.—Gross volume of tree, Scribner log rule

Tree diam- eter		Vo		E (be USAI						OF	
(inches)	1	1½	2	2½	3	3½	4	$4\frac{1}{2}$	5	51/2	6
101 111 121 131 1415	31 41 51 63 75 90	40 54 66 84 100 120	49 66 82 104 125 150	54 74 94 119 144 174	60 82 105 134 162 198	112 143 174 214	119 152 185 230				
16	100 124 135 153 171	140 162 184 208 234	176 204 232 264 296	205 239 272 310 348	234 274 313 357 401	255 299 342 392 440	276 324 372 426 479				
21 22 23 24 25	190 210 232 254 280	261 288 319 350 386	332 367 406 445 492	391 433 480 528 584	450 499 555 611 676	495 550 610 672 745	540 600 666 732 814	576 644 717 791 881	613 687 768 850 948		
26 27 28 29 30	305 332 358 386 414	422 460 497 536 576	539 588 636 686 737	640 698 757 818 879	740 809 878 950 1, 021	894 970 1, 049		1,060 1,151 1,249	1, 143 1, 241 1, 350	1,323 1,444	1, 405 1, 538
31	444 475 506 538 574	619 662 707 752 805	908 967	948 1, 016 1, 088 1, 160 1, 243	1, 183 1, 268 1, 352	1, 311 1, 406 1, 501	1, 544 1, 650	1,563 1,676 1,790	1,687 1,809 1,931	1, 817 1, 953 2, 089	1, 947 2, 097 2, 247
36	611 647 683 722 761	909	1, 171 1, 237	1, 326 1, 408 1, 491 1, 580 1, 668	1,646 1,745	1,830 1,940	2, 013 2, 135	2, 196 2, 332	2, 378 2, 528	2, 558 2, 718	2, 739 2, 908

Table 51.—Gross volume of tree, Scribner log rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	5½	6
10 11 12 13 14 15	32 42 52 65 78 92	42 55 68 86 104 124	51 68 84 107 130 155	57 77 96 124 150 180	63 86 109 140 170 205	116 150 183 222	122 159 196 239				
16 17 18 19 20	106 123 140 158 175	143 166 190 215 240	180 210 241 272 304	210 246 283 320 358	240 282 325 369 4 13	261 308 356 404 454	282 334 386 440 494				
21 22 23 24 25	196 216 240 263 287	268 296 330 362 396	340 377 420 462 506	402 446 497 548 601	464 514 574 635 696	510 566 632 698 768	556 619 690 761 840	594 664 743 823 909	632 708 796 885 978		
26_ 27_ 28_ 29_ 30_	311 340 368 397 426	431 472 512 552 593	551 603 655 708 760	654 716 780 843 906	830 904 978	919 1,000 1,082	1,008 1,096 1,185	1, 092 1, 190 1, 290	1, 177 1, 283 1, 394	1, 368 1, 492 1, 615	1, 452 1, 589
31 32 33 34 35	456 486 520 554 589	636 679 728 776 826	935 998	1, 042 1, 120 1, 198	1, 213 1, 306 1, 398	1, 348 1, 450 1, 552	1,482 1,594 1,707	1, 609 1, 732 1, 854	1,736 1,869 2,002	1, 742 1, 870 2, 018 2, 166 2, 312	2, 004 2, 166 2, 329
36	624 664 703 742 780	933	1, 202 1, 274 1, 348	1, 447 1, 536 1, 625	1, 692 1, 799 1, 902	1, 881 2, 001 2, 118	2, 070 2, 203 2, 335	2, 258 2, 406 2, 546	2, 446 2, 610 2, 756	2, 458 2, 632 2, 806 2, 966 3, 126	2, 818 3, 002 3, 176

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Table 52.—Gross volume of tree, Scribner log rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	5½	6
10 11 12	33 44 55	43 58 72	53 71 89	59 80 102	65 90 116	124	131				
13 14 15	68 80 95	90 107 128	112 134 160	129 154 186	146 175 212	156 188 230					
16	110 126	148 171	187 216	218 253	249 290	272 317	295 344				
18 19 20	142 161 180	193 220 246	244 278 313	287 328 370	330 378 426	361 414 468	392 450 509				
2122	202 224	277 308	352 392	416 463	480 534	529 590	578 646	618 694	658		
23 24 25	246 269 294	339 371 407	432 473 520	512 562 618	592 651 716	653 716	714 782 866	769 845	824 908		
26 27 28 29 30	320 348 375 406 436	444 483 522 565 608	568 618 668 724 780	675 735 796 863 931	782 852 923 1,002	866 943 1, 020 1, 108		1, 030 1, 122 1, 216 1, 323	1, 108 1, 210 1, 313 1, 432	1, 400 1, 532	1, 486 1, 632
31	469 502 534 567 604	655 702 748 795 849	902 962 1, 023	1, 080 1, 153 1, 227	1, 258 1, 344 1, 431	1, 398 1, 494 1, 591	1, 424 1, 537 1, 644 1, 751 1, 876	1,670 1,787 1,904	1, 803 1, 930 2, 056	1, 942 2, 084 2, 224	2, 082 2, 238 2, 393
36 37 38 39 40	642 680 717 758 800	956 1,008 1,069	1, 232 1, 300 1, 380	1, 484 1, 570 1, 665	1, 736 1, 839 1, 950	1, 932 2, 046 2, 173	2, 002 2, 128 2, 254 2, 396 2, 539	2, 321 2, 462 2, 613	2, 514 2, 670 2, 830	2, 706 2, 872 3, 046	2, 898 3, 074 3, 262

Table 53.—Gross volume of tree, Scribner log rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	34 45 56 70 83 97	44 60 74 93 111 130	55 74 92 116 139 164	62 84 106 134 161 191		126 162 198 238	173 212				
16 17 18 19 20	111 128 146 166 185	150 174 199 226 254	189 220 252 287 322	221 258 296 338 380	253 296 340 390 439	277 325 374 428 483	301 354 407 467 527				
21 22 23 24 25	207 229 254 278 302	284 316 350 384 419	362 402 446 491 536	428 475 529 584 637	494 548 612 676 738	544 606 674 743 815	595 663 736 810 892	636 712 794 877 966	761 852 944		
26	327 356 386 417 448	454 495 537 581 625	581 634 688 745 802		876	970 1,053 1,143		1, 155 1, 256 1, 366	1, 246 1, 357 1, 477	1, 446 1, 580	1, 535 1, 684
31 32 33 34 35	481 514 548 583 620	672 719 769 819 871	924 990 1, 055	1, 107 1, 187 1, 266	1, 202 1, 290 1, 384 1, 478 1, 547	1, 435 1, 539 1, 644	1, 580 1, 694 1, 809	1,717 1,842 1,968	1,854 1,991 2,128	1, 998 2, 150 2, 300	2, 142 2, 308 2, 473
36	656 696 736 778 820	923 980 1, 037 1, 098 1, 159	1, 190 1, 264 1, 338 1, 418 1, 498	1, 430 1, 523 1, 615 1, 711 1, 806	1,671 1,782 1,892 2,004 2,115	1, 861 1, 984 2, 106 2, 235 2, 364	2, 051 2, 186 2, 320 2, 466 2, 612	2, 235 2, 386 2, 536 2, 690 2, 844	2, 419 2, 585 2, 751 2, 914 3, 077	2, 605 2, 783 2, 961 3, 138 3, 314	2, 791 2, 981 3, 171 3, 361 3, 551

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Table 54.—Gross volume of tree, Scribner log rule

Tree		VO	LUM	E (bo	oard f	eet) I	BY N	UME	BER	OF	
diam- eter			1	USÀE	BLE 1	6-FO	OT I	OGS			
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	36 47 58 71 84 100	47 62 76 94 113 134	58 76 95 118 142 169	65 87 109 137 165 198	72 98 123 156 188 226	131 167 203 246	139 178 218 266				
16 17 18 19 20	115 132 150 170 189	156 180 205 233 260	196 228 260 296 331	230 268 306 348 390	264 308 351 400 450	288 337 386 440 496	313 366 420 481 542				
21	212 234 259 284 310	292 322 358 393 430	371 411 456 502 551	438 487 541 596 655	506 563 626 690 759	559 622 691 760 840	612 681 756 831 920	656 732 816 900 996	783 876 969		
26	337 367 397 428 460	468 510 552 597 642	600 654 708 766 825	714 779 844 914 985	904 981	1,002 1,086	1, 100 1, 192	1, 194 1, 297	1, 288 1, 402	1, 494 1, 631 1, 768	1. 587
31	493 526 562 597 636	838	948 1, 014 1, 079	1, 136 1, 216 1, 296	1, 325 1, 419 1, 513	1,474 1,580 1,684	1,623 1,740 1,856	1,762 1,892 2,020	1, 902 2, 043 2, 184	1, 910 2, 052 2, 206 2, 361 2, 526	2, 201 2, 370 2, 538
36	756	949 1, 008 1, 066 1, 128 1, 190	1, 300 1, 376	1,567 1,661	1,834 1,946	2, 042 2, 168	2, 251 2, 389	2, 458 2, 612	2, 666 2, 836	3.052	3, 076 3, 269

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Table 55.—Gross volume of tree, Scribner log rule

		***		777 45							
Tree diam- eter		VO.			oard f				BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	37 48 60 73 86 102	48 64 79 98 116 138	60 79 98 122 146 174	66 90 112 141 169 204	73 100 127 160 192 233	136 172 208 254	145 184 223				
16 17 18 19 20	119 137 155 174 194	161 186 212 239 267	203 236 268 304 340	238 278 316 359 402	274 319 364 414 464	300 350 400 456 511	327 382 437 498 558		633		
21 22 23 24 25	217 240 265 290 319	299 331 366 402 443	381 422 468 514 567	450 500 555 610 674	520 577 642 707 782	575 639 709 779 864	630 701 776 851 946	675 754 838 922 1, 026	806 900		
26	348 377 406 439 472	484 525 566 612 660	620 673 726 786 847	940	932 1,009 1,093	1, 034 1, 118 1, 210	1, 135 1, 228 1, 328	1, 234 1, 337 1, 450	1, 217 1, 332 1, 446 1, 571 1, 696	1, 541 1, 681	1, 636 1, 791
31	505 538 574 611 652	858	970 1, 038 1, 105	1, 164 1, 246 1, 328	1, 359 1, 455 1, 551	1, 513 1, 620 1, 726	1, 667 1, 784 1, 901	1,810 1,940 2,071	1, 824 1, 953 2, 097 2, 241 2, 408	2, 108 2, 266 2, 423	2, 262 2, 434 2, 605
36 37 38 39 40	693 734 775 818 862	1. 035	1. 336	1.611	1. 886	2.102	2.319	2. 534	2, 576 2, 748 2, 920 3, 087 3, 254	2.960	3. 172

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Table 56.—Gross volume of tree, Scribner log rule

Tree diam-		vo					BY N OT I		BER	OF	
eter (inches)	1	1½	2	2½	3	3½	4	4½	5	5½	6
10	38 50 61 76 90 106	50 66 80 101 122 143	62 81 100 126 153 180	69 92 115 146 178 210	76 103 130 166 202 241	139 178 218 262	148 190 233				
16 17 18 19 20	121 140 159 179 199	164 191 218 246 274	207 242 276 312 349	244 285 326 369 413	280 328 375 426 477	307 360 414 470 526	452		654		
21 22 23 24 25	222 245 272 299 326	306 338 376 414 454	390 432 481 530 581	462 512 571 630 692	534 591 661 731 802	590 655 730 806 888	647 719 800 882 973	694 774 866 958 1, 056	829		
26	354 386 418 450 482	493 538 583 629 675	632 690 748 808 868	966	958 1, 041 1, 123	1, 062 1, 154 1, 246	1, 166 1, 267 1, 368	1, 266 1, 379 1, 492	1, 243 1, 367 1, 491 1, 617 1, 743	1, 591 1, 732	1, 691 1, 846
31 32 33 34 35	516 550 590 629 668	884	994 1, 066 1, 139	1, 194 1, 281 1, 369	1, 394 1, 496 1, 599	1, 552 1, 666 1, 782	1, 709 1, 837 1, 965	1, 858 1, 999 2, 140	1, 875 2, 007 2, 161 2, 315 2, 476	2, 166 2, 334 2, 502	2, 325 2, 508 2, 690
36- 37- 38- 39- 40	708 752 795 839 883	, 060 1 , 123 1	1, 369 1 1, 451 1 535 1	1,652 1 1,753 2	1, 934 2 2, 055 2 2, 173 3	2, 157 2 2, 292 2 2, 428 3	2, 380 2 2, 529 2 2, 682 3	2, 601 2 2, 768 3	2, 636 2, 822 3, 007 3, 176 3, 345	3, 040 3, 237	3, 258 3, 467

Table 57.—Gross volume of tree, Scribner log rule

TD.		377) T TT3	4 TO (1	C 43	D 37		DIID	0.77	
Tree diam-		V	OLUI				BY I			OF.	
eter (inches)	1	11/2	2	21/2	3	31/2	4	41/2	5	51/2	6
(inches)		1/2				372		472		0/2	
10	39	51	63	71	79						
11 12	52 64	68 85	84 106	96 122	108 138	148	157				
13	78	104	130	151	172	185	198				
14 15	91 108	123 146	155 185	180 216	206 248	222 270	239 293				
16	125 143	170 196	215 248	253 292	291 336	319 370	347 403				
17	161	220	280		381	420	459				
19	182	251	320	378	436	481	526				
20	204	282	359	425	491	542	592	633	674		
21	229	316	404	478	553	612		720			
22	254 280	351 388	448 495	532 588	615 681	682 754			864		
24	305	424	542	644	747	826	904		1, 058		
25	335	466	597	710	824	913	1,002	1, 087	1,172		
26	365	508	652	776	901	1.000	1.099	1. 193	1. 287		
27	396	552	708	845	982	1,089	1,196	1,300	1,404		
28 29	426 460	594 644	763 827	912	1,062	1, 178	1, 294	1,408	1, 522	1, 625 1, 776	1,728
30	494	692								1, 926	
31	530	744	050	1 140	1 220	1 400	1 620	1 700	1 026	2, 086	0 025
32	567	797	1.027	1, 233	1.439	1 603	1. 767	1 923	2.079	2 244	2.410
33	604	850	1,096	1,317	1, 538	1,714	1,890	2, 058	2, 226	2, 405 2, 566	2, 584
34	642 684	903	1, 164	1,400	1,636	1,824	2,013	2, 192	2, 372	2, 566	2, 759
			()		') [']	1	l	ı '	'	<u> </u>
36	726	1, 024 1, 084	1, 323	1,594	1, 865	2, 082	2, 298	2, 508	2, 717	2, 930	3, 144
37 38	810	1, 144	1, 401	1, 788	2, 097	2, 340	2, 584	2, 828	3, 073	3, 308	3, 544
39	858	1, 214	1,570	1,897	2,224	2,486	2,747	3, 001	3, 255	3, 508	3, 760
40	905	1, 283	1, 661	2,006	2, 351	2, 630	2, 910	3, 174	3, 437	3, 706	3, 976

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Table 58.—Gross volume of tree, Scribner log rule

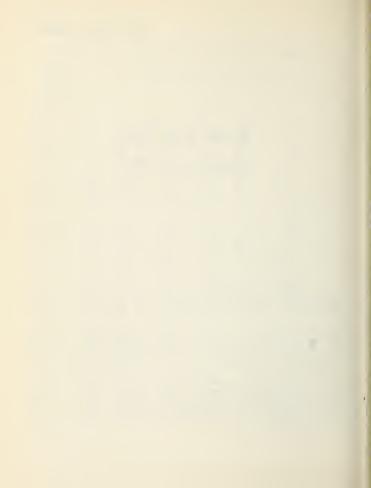
Tree diam- eter		VO:					BY N OT I			OF	
(inches)	1	1½	2	21/2	3	31/2	4	41/2	5	51/2	6
101 111 121 131 1415	41 54 66 80 95 111	54 71 88 108 128 150	66 88 109 136 162 190	74 100 126 157 188 223	83 112 142 178 215 256	152 192 232 279	163 206				
16 17 18 19 20	127 146 166 188 210	172 200 228 258 290	218 254 289 329 369	257 300 342 390 437	296 345 394 450 505	325 380 434 496 558	414				
21 22 23 24 25	235 260 287 314 343	324 360 398 436 478	414 459 509 559 612	491 545 606 666 729	568 631 702 773 846	629 700 777 854 938	690 769 852 936 1,030	740 828 922 1,016 1,118	887 992 1, 096		
26	372 404 436 471 506	518 564 610 660 709	665 724 784 848 912	865 938 1, 015	1,006 1,091 1,182	1, 117 1, 212 1, 312	1, 228 1, 332 1, 443	1,335 1,450 1,574	1, 442 1, 569 1, 706	1, 674 1, 828 1, 982	1, 778 1, 949
31	542 579 620 660 700	929	1, 051 1, 124 1, 198	1, 262 1, 352 1, 442	1, 474 1, 580 1, 687	1, 642 1, 762 1, 881	1, 811 1, 943 2, 075	1, 972 2, 118 2, 263	2, 132 2, 292 2, 451	2, 141 2, 300 2, 471 2, 652 2, 824	2, 469 2, 660 2, 852
36	786	1, 110	1, 435	1. 732	2.029	2.266	2.502	2. 736	2,970	2, 998 3, 202 3, 405 3, 606 3, 806	3. 434

Table 59.—Gross volume of tree, Scribner log rule

Tree diam- eter		VO	LUM				BY N OT I		BER	OF	
(inches)	1	11/2	2	$2\frac{1}{2}$	3	3½	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	42 54 67 82 97 114	55 72 90 110 132 155	68 90 112 139 166 196	77 103 128 161 194 230	86 116 145 183 221 264		167 212 257				
16 17 18 19 20	131 151 171 194 216	178 206 234 266 298	226 262 298 339 380	266 310 352 402 450	307 357 407 464 520	337 393 449 512 574	367 429 491 560 629				
21 22 23 24 25	241 266 293 320 351	333 368 406 446 490	425 470 520 571 628	504 559 620 680 748	584 648 719 790 868	646 718 796 874 963	874 958	1,040	909 1, 016 1, 122		
26 27 28 29 30	382 415 448 483 518	533 580 627 677 727	684 745 806 871 936	890 964 1, 042	1, 035 1, 123 1, 214	1, 150 1, 248 1, 350	1, 266 1, 373 1, 485	1, 377 1, 494 1, 620	1, 488 1, 616 1, 756	1, 726 1, 882 2, 038	1, 835 2, 007
31 32 33 34 35	555 592 633 674 718	833 891 949	1, 005 1, 074 1, 149 1, 224 1, 307	1, 291 1, 382 1, 474	1, 508 1, 616 1, 725	1, 682 1, 803 1, 924	1, 857 1, 990 2, 124	2, 022 2, 169 2, 316	2, 188 2, 348 2, 509	2, 360 2, 538 2, 716	2, 532 2, 727 2, 922
3637383940	806 851 900	1, 141 1, 205 1, 276	1, 390 1, 474 1, 559 1, 651 1, 743	1, 780 1, 886 1, 996	2, 086 2, 212 2, 342	2, 330 2, 471 2, 620	2, 575 2, 730 2, 898	2, 816 2, 990 3, 168	3, 058 3, 250 3, 438	3, 297 3, 502 3, 706	3, 536 3, 754 3, 974

Doyle Log Rule

(Form Class 65-90)



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Table 60.—Gross volume of tree, Doyle log rule

Tree diam-		VO					BY N OT I			OF	
eter (inches)	1	11/2	2	21/2	3	31/2	4	$4\frac{1}{2}$	5	51/2	6
10	6 10 14 20 26 34	6 12 16 24 32 42	7 13 19 28 38 50	20 30 41 55	21 32 44 60						
16 17 18 19 20	41 50 59 70 81	51 63 75 90 105	61 76 91 110 129	68 85 102 124 146	75 94 114 138 163	79 100 121 147 174	83 106 128 156 185				
21 22 23 24 25	94 106 120 135 150	122 139 158 178 199	150 172 196 221 248	171 196 225 255 287	192 220 254 289 326	205 236 272 308 350	218 252 290 327 374	229 266 308 349 399	240 279 325 371 424		
26	166 184 202 221 240	221 246 270 296 323	276 308 339 372 406	320 357 394 434 474	363 406 449 495 541	392 438 484 534 584	420 470 520 574 627	448 502 556 616 676	476 534 593 658 724	630 702 774	666 745 824
31 32 33 34 35	261 282 305 328 352	352 382 414 445 480	444 481 522 562 607	519 564 613 662 715	594 647 704 761 823	644 703 765 828 896	693 759 826 894 970		1,025	852 930 1, 017 1, 104 1, 196	1, 182
36	376 402 428 456 484	514 550 586 626 666	652 698 745 797 849	946	1, 024 1, 094	1, 040 1, 116 1, 196	1, 126 1, 207 1, 297	1, 215 1, 305 1, 398	1, 304 1, 403 1, 498	1, 290 1, 395 1, 500 1, 604 1, 708	1, 486 1, 597 1, 709

Table 61.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO	LUM	E (bo USAI	oard f	eet) l 16-FO	BY N OT I	UMI	BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	4½	5	5½	6
10 11 12 13 14 15	7 11 15 21 27 36	8 12 18 26 33 44	8 14 20 30 39 52	22 32 42 58	23 34 46 64						
16 17 18 19 20	44 53 62 74 85	55 68 80 95 110	66 82 97 116 135	74 92 110 132 154	82 102 122 147 172	86 108 130 156 184	90 114 137 166 195	204			
21 22 23 24 25	98 110 124 139 156	128 144 164 184 208	157 179 204 229 260	180 205 235 264 301	202 231 266 300 342	216 248 284 320 367	230 264 302 341 392	242 278 320 364 418	252 292 339 386 444		
26 27 28 29 30	174 192 210 230 250	232 257 282 310 337	291 322 354 389 424	337 374 412 454 494	383 427 471 518 565	414 460 508 560 612	444 494 545 602 658	474 529 584 647 710	503 564 624 692 761	662 737 813	700 782 865
31 32 33 34 35	271 292 316 339 366	366 396 428 460 499	462 499 540 582 632	541 586 636 686 745	620 674 732 790 858	672 732 796 860 936	724 791 861 931 1, 014	779 848 924 999 1, 090	1,067		1, 232
36	392 418 445 474 502	536 573 610 652 692	681 728 776 829 882	984	998 1, 068 1, 140	1,089 1,166 1,248	1, 180 1, 264 1, 355	1, 274 1, 366 1, 461	1, 367 1, 469 1, 567	1, 356 1, 463 1, 570 1, 676 1, 782	1, 559 1, 672 1, 786

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Table 62.—Gross volume of tree, Doyle log rule

						-					
Tree diam- eter		VOI	LUM	E (bo USAE	ard f	eet) 1 6-FO	BY N OT I	UMI LOGS	BER	OF	
(inches)	1	1½	2	2½	3	3½	4	4½	5	5½	6
10 11 12 13 14 15	7 12 16 22 29 37	8 14 19 27 36 46	9 16 22 32 43 56	23 35 47 62	24 38 51 68						
16 17 18 19 20	45 56 66 77 88	56 71 84 100 114	68 86 103 122 141	76 96 116 139 161	84 107 130 156 181	88 114 138 166 192	93 120 146 175 204		225		
21 22 23 24 25	101 114 130 146 163	132 150 172 194 218	164 186 214 242 272	188 214 247 280 315	211 241 280 318 358	226 258 300 340 385	240 276 320 363 412	253 291 340 388 440	266 306 359 412 468		
26 27 28 29 30	180 200 219 239 259	240 268 294 322 350	301 336 370 406 441	349 390 432 474 516	397 445 493 542 590	430 482 534 586 638	462 518 574 630 687	492 554 616 678 742	523 590 658 727 796	697 774 850	736 820 905
31	281 303 328 353 378	380 411 446 481 517	480 519 564 609 656	563 610 665 719 775	646 701 764 828 894	701 763 833 903 975	756 825 901 977 1, 056	1,050	1,034 1,124	932 1, 014 1, 112 1, 211 1, 308	1, 190 1, 298
36	404 433 462 491 520	554 594 635 676 718	703 756 808 862 916	961 1, 025	1, 036 1, 114 1, 188	1, 132 1, 217 1, 301	1, 228 1, 320 1, 414	1, 326 1, 431 1, 528	1, 424 1, 537 1, 638	1, 406 1, 524 1, 644 1, 753 1, 862	1, 625 1, 751 1, 868

Table 63.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO:					BY N OT I			OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4.	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	8 13 18 24 30 39	9 16 22 29 37 48	10 18 25 34 44 58	26 37 48 65	28 40 53 72						
16	48 58 67 80 92	60 74 86 103 120	73 89 105 126 148	82 100 120 144 169	91 112 134 162 190	96 119 142 173 203	101 126 151 184 216				
2122232425	106 121 136 151 170	160	173 198 224 251 284	198 228 259 290 329	224 258 294 330 374	240 278 316 354 403	256 297 338 378 432	270 314 358 403 461	284 330 379 428 490		
26	188 206 225 247 269	252 277 303 334 364	316 348 381 420 459	366 406 445 491 537	417 463 509 562 615	452 502 551 609 667	487 540 593 656 719	520 578 636 706 776	616 679 756	720	761 854 947
31 32 33 34 35	293 317 341 365 392	398 431 464 498 537	502 545 588 631 682	590 642 693 744 806	677 739 798 858 930		795 871 943 1, 015 1, 102	936 1, 014 1, 092	1,000 1,084 1,168	1, 072 1, 166 1, 258	1,349
36_ 37_ 38_ 39_ 40	420 448 475 506 538	576 615 654 698 744	733 782 832 891 950	929 990 1, 060	1, 076 1, 149 1, 230	1, 176 1, 256 1, 348	1, 190 1, 276 1, 363 1, 466 1, 569	1, 379 1, 476 1, 583	1, 482 1, 589 1, 700	1, 587 1, 700 1, 820	1, 692 1, 811 1, 940

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Table 64.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO					BY N OT I			OF	-
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	8 13 18 25 32 40	9 16 22 30 40 51	10 18 25 36 48 62	27 40 52 68	29 43 57 75	60					
16 17 18 19 20	49 60 71 84 96	62 77 92 109 126	75 - 94 112 134 155	84 106 127 152 178	93 118 142 171 200	99 125 151 182 214	105 132 160 194 229				
21 22 23 24 25	110 125 142 159 176	145 166 189 212 236	180 206 236 265 295	207 237 272 308 342	234 268 309 350 390	252 289 332 376 421	270 310 356 401 452	284 328 378 428 484	298 345 400 456 515		
26	193 214 234 256 279	259 288 316 347 378	325 362 398 438 478	378 422 466 512 560	431 482 533 587 641	468 522 578 636 696	504 563 622 686 750	539 604 668 739 810	574 644 714 792 871		799 895 991
31	304 328 354 380 406	413 446 483 520 557	522 565 612 659 708	613 666 722 779 838	704 767 833 899 968	766 837 910 982 1, 058	828 907 986 1, 066 1, 149	974 1, 060	1, 042 1, 135	1, 118 1, 220	1, 092 1, 193 1, 306 1, 419 1, 524
36_ 37_ 38_ 39_ 40_	433 463 493 525 557	595 637 679 725 771	925	964 1,030 1,102	1, 116 1, 196 1, 278	1, 222 1, 309 1, 402	1, 232 1, 327 1, 422 1, 527 1, 632	1, 434 1, 541 1, 650	1,542 1,660 1,773	1, 651 1, 776 1, 898	1,760 1,891 2,024

Table 65.—Gross volume of tree, Doyle log rule

Tree diam- eter		vo	LUM	E (b	oard f	eet)] l6-F0	BY NOT I	LOGS	BER	OF	
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10 11 12 13 14 15	9 14 19 26 34 43	10 17 23 32 42 54	12 20 27 39 51 66	30 42 56 73	46	64 84	66				
16	52 63 74 87 100	66 81 96 114 131	80 99 118 140 162	90 112 134 160 186	125 150	106 133 160 192 224	141 170	251	263		
21 22 23 24 25	115 130 147 164 183	152 172 196 219 246	188 215 244 274 308	216 248 282 318 358	245 280 321 362 408	264 302 346 390 441	324 370	297 343 394 446 507	312 362 418 474 540		
26 27 28 29 30	202 222 243 266 289	272 300 329 361 392	341 378 415 456 496	397 441 486 534 582	453 504 556 612 668	492 547 604 664 726	530 590 651 717 783	568 633 700 773 846	605 676 748 829 910	793 882	838 936 1, 035
31 32 33 34 35	314 339 366 392 420	427 462 500 536 577	540 585 633 681 734	636 696 748 806 870	732 796 863 930 1, 005	1,018	943 1, 024 1, 105	1, 102 1, 190	1, 084 1, 180 1, 275	1,374	1, 242 1, 358 1, 473
36 37 38 39 40	449 480 511 544 576	618 662 705 752 798	788 844 899 960 1, 021	1, 003 1, 072 1, 144	1, 080 1, 162 1, 244 1, 328 1, 412	1, 274 1, 364 1, 459	1, 385 1, 483 1, 590	1, 498 1, 608 1, 719	1, 612 1, 732 1, 848	1, 726 1, 854 1, 979	1,841 1,975 2,110

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Table 66.—Gross volume of tree, Doyle log rule

Tree diam-		Vo					BY N OT I		BER	OF	
eter (inches)	1	1½	2	2½	3	3½	4	41/2	5	51/2	6
101112131415	10 15 20 28 35 45	12 18 24 34 44 57	13 20 28 40 53 69	30 44 58 78	33 48 63 86		68 94				
16. 17. 18. 19. 20.	55 66 77 90 104	70 85 100 118 137	85 104 123 146 170	96 118 140 168 195	108 133 158 189 220	114 142 169 202 236	120 150 180 216 251				
21	120 135 152 169 190	158 179 202 226 255	196 223 253 283 320	226 258 294 329 372	256 292 334 375 425	275 315 360 404 460	294 338 385 432 494	310 358 410 462 530	327 377 435 493 565		
26. 27. 28. 29. 30.	232	283 313 343 375 407	356 394 433 474 515	416 461 507 556 604	475 528 581 638 694	516 574 632 694 755	557 620 682 749 816	597 666 734 808 882	867	832 924	879
31	324 350 377 404 436	442 478 516 554 599	560 606 654 703 762	660 716 774 832 903	825 894 962	902 978 1, 054	979 1, 062 1, 145	1, 052 1, 143 1, 234	1, 126 1, 224 1, 322	1, 210 1, 317 1, 424	1, 186 1, 293 1, 410 1, 527 1, 656
36_ 37_ 38_ 39_ 40	529 562	644 687 731 778 826	933 995	1, 043 1, 114 1, 187	1, 210 1, 294 1, 379	1, 327 1, 419 1, 516	1, 444 1, 544 1, 653	1, 563 1, 674 1, 788	1,682 1,805 1,922	1,803 1,933 2,060	1, 786 1, 924 2, 061 2, 198 2, 336

Table 67.—Gross volume of tree, Doyle log rule

Tree diam-		VOI	JUM	E (bo	ard fo	eet) I 6-FO	BY N OT I	UME OGS	BER (OF	
(inches)	1	1½	2	21/2	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14 15	10 16 21 29 37 46	12 19 26 36 46 59	13 22 30 43 56 72	32 48 62 81	35 52 69 90						
16 17 18 19 20	56 68 81 94 108	72 88 106 124 142	87 108 130 154 177	98 123 148 176 204	110 138 167 198 230	118 148 178 212 247	125 158 190 227 264	277			
21	124 139 158 177 196	164 185 211 238 264	204 231 264 298 332	235 267 306 346 387	266 303 349 395 442	287 328 377 426 479	308 353 405 457 516	325 373 432 490 553	342 393 458 522 590		
26 27 28 29 30	216 239 262 286 310	292 324 356 389 422	367 408 450 492 535	428 478 528 578 628	490 548 605 664 722	533 596 658 723 786	576 644 712 782 851	618 692 766 844 920	659 740 821 906 990	870	920 1, 024
3132 3334 35	336 361 396 420 450	458 494 538 576 620	581 627 680 733 789	684 740 805 869 936	788 854 930 1, 005 1, 083	1, 018 1, 102	1,016 1,107 1,198	1, 094 1, 192 1, 292	1, 171 1, 278 1, 386	1, 158 1, 258 1, 376 1, 494 1, 612	1, 344 1, 473 1, 602
36 37 38 39 40	480 514 548 582 615	662 710 758 807 855	906 968 1, 032	1,079 1,156 1,232	1, 161 1, 252 1, 344 1, 431 1, 518	1,375 1,476 1,574	1,498 1,607 1,718	1,622 1,744 1,859	1,746 1,880 2,000	1,872 2,014 2,144	1, 997 2, 148 2, 288

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Table 68.—Gross volume of tree, Doyle log rule

Tree diam- eter	VOLUME (board feet) BY NUMBER USABLE 16-FOOT LOGS									OF	
(inches)	1	1½	2	2½	3	3½	4	41/2	5	51/2	6
10	11 17	13 20	15 24								
11 12	23	28	33	36	39						
13	30 38	38 48	46 58	56 64	55 71	74	77				
15	48	62	76	85	94	100	105				
16	59 71	76 92		105 128	117 144	125 154	133 164				
18	83	108	133	152	171	184	196				
19	98 112	128 148	158 184	182 212	206 240	221 258	236 277	290	304		
21	129	172	214	247	280	303	326	344	362		
2223	146 164	195 220	244 276	282 320	321 365	348 394	374 424	396 452	419 480		
24	182	244	307	358	409	442	474	508	541		
25	204	275	346	404	462	500	539	578	616		
26 27	225 247	304 335	384 423	449 496	514 568	559 618	604 669	648 719			
28 29	269 294	366 401	462 508	542 597	623 686	678 748	734 809	790 874	846		948
30	320	437	554	652	750	817	884		1, 031	1, 102	1, 174
31	348	477	604	713	822			1,052	1, 130	1, 212	1, 294
32	376 404	516 556	655 706	775 836	895 967		1, 066 1, 153	1, 148 1, 242	1, 230 1, 332	1, 322 1, 434	1, 413
34 35	433 465	595 641	757 817	898	1, 039	1, 140	1, 240	1, 338	1, 435	1, 434 1, 547 1, 676	1, 659
36 37	497 530	687 733	936	1, 116	1, 295	1, 424	1,552	1,681	1,810	1,806 1,940	2,071
38	562 598	778 831	995 1, 064							2, 076 2, 220	
40	635	884	1, 132	1, 352	1, 572	1, 735	1, 898	2, 050	2, 202	2, 364	2, 525

Table 69.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO	LUM	E (bo JSAB	ard f LE 1	eet)] 6-FO	BY N OT I	UMI LOGS	BER	OF	
(inches)	1	11/2	2	$2\frac{1}{2}$	3	3½	4	$4\frac{1}{2}$	5	5½	6
10 11 12 13 14 15	12 18 24 32 41 51	14 22 30 40 52 66	16 26 35 49 63 80	38 54 70 90	41		85				
16 17 18 19 20	61 74 86 102 117	78 96 112 134 155	96 118 139 166 193	109 134 160 191 222	122 151 180 216 252	130 162 194 232 271	138 172 207 248 290				
21 22 23 24 25	134 151 170 190 210	178 202 229 256 284	223 253 288 322 358	258 293 335 376 419	292 333 382 430 480	316 362 413 464 521	340 390 444 499 562	359 413 474 535 602	378 436 504 571 643		
26	231 255 279 305 331	313 346 380 416 452	395 438 481 528 574	462 514 565 621 676	529 589 649 714 778	577 642 708 778 849	625 696 766 843 920	670 748 825 910 996	800 884 978		1, 107
31 32 33 34 35	360 388 418 449 480	493 532 575 618 663	626 677 732 788 846	739 802 868 936 1,005	926 1,004 1,083	1,016 1,102 1,190	1, 106 1, 201 1, 296	1, 192 1, 296 1, 399	1, 277 1, 390 1, 502	1, 260 1, 372 1, 496 1, 620 1, 742	1, 467 1, 602 1, 737
36	511 546 581 618 655	859	966 1,030 1,100	1, 152 1, 232 1, 315	1, 339 1, 434 1, 530	1, 473 1, 577 1, 687	1,607 1,720 1,844	1,742 1,868 1,998	1,877 2,016 2,152	1, 865 2, 012 2, 160 2, 307 2, 454	2, 148 2, 305 2, 462

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Table 70.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO					BY N OT I			OF	
(inches)	1	1½	2	21/2	3	3½	4	$4\frac{1}{2}$	5	51/2	6
10 11 12 13 14 15	12 18 25 34 42 53	14 22 31 42 54 68	16 26 37 51 65 83	40 56 72 91	44	84	87 117				
16 17 18 19 20	64 77 90 106 121	82 100 118 140 160	101 124 146 173 200	115 142 168 200 231	129 159 189 226 262	138 170 203 243 282	147 182 217 260 303				
21 22 23 24 25	138 156 176 196 218	184 209 237 264 295	231 262 298 333 372	268 304 347 389 436	304 346 396 445 499	329 376 429 481 542	354 406 462 517 586	374 430 493 554 628	395 455 524 592 670		
26	240 264 289 316 342	326 360 394 432 468	412 456 499 547 595	482 535 588 644 701	553 614 676 742 807	604 670 738 810 882	878	781 862 949	836 924 1,020	980 1, 087 1, 195	
31	371 400 431 462 496	509 550 594 637 685	647 699 756 812 874	964	958 1, 038 1, 117	1, 052 1, 140 1, 228	1, 051 1, 146 1, 242 1, 339 1, 447	1, 235 1, 340 1, 446	1, 324 1, 439 1, 554	1, 422 1, 549 1, 676	1, 521 1, 659 1, 797
36	529 564 600 638 676	733 783 834 888 943	1 002	1 196	1 390	1 530	1, 555 1, 671 1, 787 1, 913 2, 039	1 812	1 953	2 096	2, 078 2, 238 2, 397 2, 558 2, 720

Table 71.—Gross volume of tree, Doyle log rule

Tree diam- eter		Vo					BY N OT 1			OF	
(inches)	1	11/2	2	21/2	3	3½	4	41/2	5	51/2	6
10 11 12 13 14 15	13 20 26 35 44 56	16 24 32 44 56 72	18 28 38 53 68 88	19 30 42 58 76 99	20 32 45 64 84 110		92				
16 17 18 19 20	67 80 94 110 125	87 105 124 145 166	107 130 153 180 208	122 149 176 208 240	137 168 200 236 273	146 180 215 254 294	156 193 230 273 316				
21 22 23 24 25	143 161 182 202 226	192 216 245 273 306	240 271 308 344 387	278 315 359 402 453	316 359 410 460 519	342 390 444 498 564	368 421 478 535 610	390 448 511 575 655	544 615		
26 27 28 29 30	250 274 299 326 353	340 374 408 446 484	430 474 518 566 615	504 557 610 668 726	578 640 702 770 837	631 699 767 841 915	684 758 832 912 993	735 816 898 987 1, 076	875 964 1,062	1, 022 1, 132 1, 241	1, 081 1, 202
31 32 33 34 35	382 412 444 475 512	525 567 612 656 708	668 722 779 836 904	791 856 925 994 1, 076	990 1, 071 1, 152	1, 088 1, 178 1, 268	1, 186 1, 284 1, 383	1, 280 1, 387 1, 494	1, 373 1, 490 1, 606	1, 358 1, 475 1, 604 1, 732 1, 879	1, 577 1, 718 1, 858
36	548 584 620 658 697	862 917	1, 038 1, 1 0 4 1, 176	1, 240 1, 322 1, 408	1, 442 1, 540 1, 640	1, 589 1, 697 1, 811	1,736 1,854 1,982	1, 884 2, 016 2, 150	2, 032 2, 177 2, 317	2, 026 2, 180 2, 334 2, 486 2, 639	2, 328 2, 491 2, 656

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Table 72.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO		E (bo						OF	
(inches)	1	1½	2	21/2	3	3½	4	41/2	5	51/2	6
10 11 12 13 14 15	14 20 27 36 46 58	16 25 34 46 59 74	19 30 40 56 72 91	20 32 44 62 80 103	21 34 48 68 89 115		98				
16 17 18 19 20	69 84 98 114 130	90 110 129 151 173	110 135 160 188 216	126 155 184 218 250	141 175 209 247 285	151 188 226 266 308	161 202 242 286 331				
21 22 23 24 25	148 166 188 210 233	198 223 254 284 316		288 326 373 420 469	329 372 426 481 538	356 404 463 522 586	384 437 500 563 634	407 464 535 605 681	492 570 647		
26	256 283 310 338 365	348 386 424 463 501	441 490 538 588 637	518 576 634 693 752	594 662 730 798 867	650 724 799 874 950	786 868 950	847 936 1, 028	908 1,005 1,106	1, 066 1, 179 1, 290	1, 128 1, 252
31	394 424 458 493 528	542 584 632 681 731	690 744 806 869 934	884 959	1,023 1,112	1, 125 1, 223	1, 227 1, 334	1, 324 1, 441	1, 420 1, 548	1, 408 1, 526 1, 667 1, 808 1, 948	1,633
36 37 38 39 40	562 601 640 679 718	780 836 891 948 1,004	1,070 1,142 1,216	1, 279 1, 368 1, 456	1,488 1,594 1,696	1, 642 1, 759 1, 875	1,796 1,924 2,054	1,949 2,092 2,228	2, 102 2, 260 2, 403	2, 088 2, 256 2, 424 2, 579 2, 734	2, 410 2, 588 2, 755

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Table 73.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO:	LUM		ard f				BER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	41/2	5	51/2	6
10	14 22	17 27	20 32	21 35	22 38						
11 12	29	36	43	48	53	54	56				
13	38	48	59	66	73	76	1 80				
14	48	62	75	84	93	98	103				
15	60	78	96	108	121	128	136				
16	72	94	116	132	149	160					
17 18	86 100	113 132	140 164	161 190	182 215	196 232					
19	118	156		225	256	276	297				
20	135	180	225	261	297	322	346	364	383		
21	154	207	260	302	344	374		428	452		
22	174	234	295	344	392	427	462	492	521		
23 24	195 216	264 293	332 370	388 433	444 496	483 539		558 625	594 668		
25	241	328	414	486	558	609			758		
26	266	362	459	539	619	678	737	793	849		
27	292	398	505	594	684	749	814	877	940		
28	317	434	551	650	750	820		961	1,032	1,096	1, 161
29	346 376	475 517	604 658	714 778	824 898	902	980	1,061	1,142	1, 218 1, 339	1, 294
30	3/0	517	608	118	898	984	1,009	1, 100	1, 201	1, 339	1, 427
31	408	562	717	850		1,080	1, 176	1, 273	1,370	1,470	1,570
32	441	608	776	922	1,068	1, 176	1, 283	1,386	1, 488	1,600	1,712
33 34	474 506	654	835	1 064	1, 152	1, 268	1, 385	1,497	1, 509	1, 734 1, 866	2 003
35	544	754	964	1, 149	1, 334	1, 472	1, 610	1,743	1,876	2, 020	2, 163
36	581	308	1, 035	1, 234	1, 434	1, 583	1, 732	1, 878	2, 023	2, 173	2, 323
37	618	860	1. 102	1.318	1.534	1.694	1.854	2.013	2.172	2.332	2.492
38	655	912	11.170	11.402	11.635	11. 805	11.975	12 148	12.322	2.491	12.660
39 40	740	1 025	1, 250	1, 498	1,746	1, 932	2, 118	2, 298	2,479	2, 662 2, 832	2, 844
10	740	1, 055	1, 550	1, 094	1,000	2, 009	2, 200	2, 440	2, 000	2, 002	0, 021

Table 74.—Gross volume of tree, Doyle log rule

Tree		VO:			ard f					OF	
diam- eter				JSAB	LE 1	0-1-0	OT I	10 G S			
(inches)	1	1½	2	2½	3	3½	4	4½	5	51/2	6
10	15 22	18 28	21	22 36	24						
11	30	38	33 45	50	40 55	57	59				
13	40 50	51 64	62 79	70 89	77 99	80 104	84 110				
15	62	80	99	112	126	135	144				
16	74	96	119	136	153	165	177				
17	89 104	117 138	145 171	166 198	188 224	203 242	218 260				
19	122 139	162 186	202 233	234 270	266 308	288 334	310 359	380			
21	160	214	269	314	358	389	420	445	470		
22	180	242	305	356	407	444	480	510	541		
23 24	202 225	274 306	346 386	405 453	464 520	505 566	546 611	584 656	622 702		
25	248	338	428	503	578	631	684	736			
26	272 300	372	471 521	554	636	697	758		873		
27 28	328	410 450	571	614 674	707 778	774 852	842 927	908 1,002	1,076	1, 142	1, 209
29 30	358 388	492 534	626 680	740 804	854 929	936 1, 018	1,018 1,108	1, 102	1, 187	1,266	1,346
31	421	580	740		1,016		ĺ .	'	ĺ	1	'
32	454	627	800	951	1, 102	1, 214	1,326	1, 433	1,54C	1,656	1,771
3334	489 524	676 726	928	1,106	1, 194 1, 285	1,417	1,549	1,676	1,804	1,947	2,090
35	560	778	995	1, 186	1, 378	1, 522	1,666	1,804	1, 943	2, 092	2, 242
36	595 636	828	1,062	1, 267	1, 472 1, 582	1,627	1, 782	1, 932	2, 082	2, 238	2, 393
37 38	676	943	1, 210	1, 451	1, 692	1,870	2, 047	2, 228	2, 408	2, 584	2, 761
39 40	719 762	1,005 1,067	1, 291 1, 372	1,548 1,645	1, 692 1, 805 1, 918	1, 998 2, 126	2, 191 2, 335	2, 379 2, 530	2, 567 2, 726	2, 758 2, 930	2, 948 3, 134

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Table 75.—Gross volume of tree, Doyle log rule

Tree diam-		VO	LUM	E (bo	ard fo	eet) I 6-FO	SÝ N OT I	UMB OGS	ER	OF	
eter (inches)	1	1½	2	2½	3	3½	4	4½	5	5½	6
10	16 24 31 42 52 64	20 30 39 53 67 84	23 35 47 64 82 104	24 38 52 72 93 118	26 42 57 80 104 132	60 84 109 141	114				
16 17 18 19 20	77 92 108 126 144	101 122 144 168 193	125 152 179 210 242	143 175 206 244 282	198 234	174 214 254 301 348	230 273 324				
21 22 23 24 25	164 185 208 231 256	221 250 282 314 350	397	466	478 536	403 458 521 583 655	497 564 630	529 604 678	561 643 725		
26 27 28 29 30	282 310 339 370 400	425 466 509	540 592 648	638 700 766	735 807 884	806 885 970	877 963 1, 056	946 1,040 1,144	1, 015 1, 118 1, 232	1, 188 1, 315 1, 442	1, 258 1, 398
31 32 33 34 35	434 467 502 538 576	646 696	824 889	980 1,060	1, 137 1, 230	1, 254 1, 356	1, 370 1, 483	1, 481 1, 604	1, 592 1, 726	1, 576 1, 712 1, 860 2, 008 2, 167	1,831
36	615 656 697 740 784	915 973 1, 036	1, 174 1, 249 1, 332	1, 406 1, 499 1, 598	1, 638 1, 749 1, 864	1, 811 1, 934 2, 065	1, 984 2, 119 2, 266	2, 157 2, 308 2, 462	2, 330 2, 496 2, 658	12.855	2, 675 2, 862

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Table 76.—Gross volume of tree, Doyle log rule

Tree		VO			oard f					OF	
diam- eter				JSAE	LE I	0-1-0	01. 1	2008			
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	41/2	5	51/2	6
10	17	20	24	26	27						
11	24 32	30 40	36 49	40 54	43 59	62					
12	42	54 54	49 66	74		87	92				
14	53	68	84	95	106	112	1119				
15	67	88	108	123	138	148	158				
16	81	106	131	151	171	184	197				
17	96	127	158	183	208	224	241				
18	112 130	149 174	186 218	216 254	245 289	265 314	285 338				
19	149	200	251	292		362	391	412	434		
21 22	170 190	229 258	288 325	336 380	384 434	418 474	452 514	480 548	508		
23	214	290	367	430	493	538	582	624	665		
24	237	323	409	480	552	601	650	699	748		
25	264	361	458	539	620	678	737	794	850		
26	292	400	508	598	689	756	824	888	953	- -	
27	321	440	560	661	762	837	912		1,058		
28 29	350 381	481 524	612 668	724 791	836		1,000 1,094				
30	412	568	725	859	914	1,004	1, 189	1.292	1.395	1, 304	1, 450
								ļ ´	· ·	'	l ′
31 32	446 480	616 664	787	934	1,082	1, 192	[1, 302]	1, 411	1,520	1,632	1,744
33	516	715	914	1,010	1, 172 1, 266	1, 293	1.530	1, 656	1, 781	1, 709	2.058
34	552	766	980	1,170	1,360	1,502	1,645	1,782	1,918	2,070	2, 222
35	594	826	1,058	1, 264	1,470	1,626	1, 782	1, 932	2,082	2, 242	2,403
36	635	886	1, 137	1,359	1, 581	1,750	1. 919	2, 082	2, 246	2, 415	2, 584
37	676	944	1.213	1, 454	1.694	1.875	2.056	2 236	2.416	2 596	2 775
38	718	1,004	1, 289	1,548	1,808	2,000	2, 192	2, 388	2, 585	2,776	2, 966
40	807	1, 132	1, 457	1,048 $1,749$	$\frac{1,924}{2.041}$	2, 133	2, 342	2, 702	2, 750	3 133	2, 966 3, 159 3, 352
	30.	-, 102	_,,	-, , 10	-, 311	_, _00	_, 101	-, 102	-, 511	0,100	0,002

Table 77.—Gross volume of tree, Doyle log rule

Tree diam- eter		vo			oard f					OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	41/2	5	5½	6
10	18 26	22 32	26 39	28 42	30 46						
11 12	34	43	52	58		66	69				
13	45	58	71	80	88	93	98				
14	56 70	73	90 112	102 128	113 144	120 154	127 165				
15	70	91	112	128	144	154	165				
16	83	109	135	156	176	190	203				
17	100 117	132 156	164 194	190 226	216 257	234 278	251 299				
18 19	136	182	227	264	301	326	352				
20	154	207	260	302	345	376	406	430	453		
21	175	236	298	348	397	434	470	499	528		
22	196	266	335	392	449	491	533	568	602		
23	221 246	300 336	380 426	446 501	512 576	559 628	606 680	650 732	693		
24 25	272	373	474	558	642	703	764	822	881		
26 27	299 330	410 454	521 577	614 682	708 787	778 865		913 1, 018	978		
28	361	497	633	750	866	952	1.038	1.123	1, 208	1, 284	1.360
29	392	541	690	818	946 1, 026	1,040	1, 134	1, 230	1,326	1, 416	1,505
30	424	586	748	887	1,026	1, 128	1, 230	1, 337	1, 444	1, 547	1,650
31	458	634	810	963	1, 116	1, 230	1,344	1,458	1,571	1,686	1,802
32	493	683	873	1,040	1, 207 1, 309	1, 333	1, 459	1,578	1,698	1,826	1,955
33	532 571	738 794	1 016	1, 126	1, 309	1, 446	1,584	1,716	1,847	2 154	2, 134
35	610				1, 516						
36	650	908	1.165	1.394	1, 622	1. 796	1.970	2 140	2 309	2.482	2 656
37	695	972	1, 248	1, 496	1,744	1, 931	2, 118	2, 305	2, 492	2, 678	2, 863
38	740	1,035	1, 330	1,598	1,867	2,067	2, 267	2, 472	2,676	2, 873	3, 070
39 40	784 820	1, 100	1, 415	1,700	1, 744 1, 867 1, 985 2, 103	2, 202	2, 420	2, 632	2,843	3, 055	3, 267
10	029	1, 104	1, 000	1,002	2, 103	2, 000	2,012	2, 101	0,010	0, 201	0, 404

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Table 78.—Gross volume of tree, Doyle log rule

Tree		770	T TIME	Tr (b)	ord f	oot) I	ev N	TIME	PPD	OF	
diam-	VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS										
eter (inches)	1	1½	2	21/2	3	31/2	4	41/2	5	5½	6
10	18	22	26	28	31						
11	27 36	34 46	40 55	45 62	50 68	72	75				
13	47 58	60	74	83	92	98	103				
14	72	76 94	93 117	105 134	117 150	124 161	131 172				
16	86	114	141	162	184	198	213				1
17	102	136	170	196	222	240	259				
18 19	119 139	158 186	198 234	230 272	261 310	283 336	305 363				
20	159	214	269	314	359		421	446	471		
21	182	246	310	362	414	452	490	522	553		
22 23	204 228	277 311	350 394	410 463	470 532		560 630	598 676			
24	253	346	438	516	594	648	701	755	809		
25	282	386	490	578	665	728	792	853	914		
26	310		541	638			882	951	1,020		
27 28	340 369		594 648	703 768			1. 064	1, 051	$\begin{vmatrix} 1,129 \\ 1,238 \end{vmatrix}$	1,317	
29	403 437				974	1,071	1,168	1, 267	1,366	1, 459	1,552
30		604			1	1	1	l ′	1	1	1, 709
31 32	474 511			999	1, 158	1, 278	1, 397	1,515	1,633	1, 754	1,876 2,042
33	548	762	976	1, 164	1, 352	1, 496	1, 640	1, 777	1, 914	2, 064	2, 042 2, 213 2, 384
34 35	586 628		1,044	$\begin{bmatrix} 1,247 \\ 1 & 344 \end{bmatrix}$	1, 450 1 564	1,605	1,760	1,908	2,056	2, 220	2, 384 2, 570
				1	1	1	1	1	1	1	1
36 37	714	1 998	11.283	11.539	11.795	1.989	2 183	2 376	2 569	2 762	2, 757 2, 954
38	756	1,058	1,361	1,636	1,912	2,118	12,324	2.534	2.744	12.948	3, 152 3, 365
40	853	1, 199	1, 545	1, 856	2, 168	2, 204	2, 488	2, 707	3, 108	3, 343	3, 578
							5				4

Table 79.—Gross volume of tree, Doyle log rule

Tree diam-		vo						UMI	BER	OF	
eter (inches)	1	1½	2	$2\frac{1}{2}$	3	3½	4	$4\frac{1}{2}$	5	51/2	6
10	19 28 37 49 61 74	24 35 47 64 80 98	28 42 57 78 98 121	30 47 64 88 112 138	32 52 71 98 125 156		78 110 141				
16 17 18 19 20	88 106 123 144 164	116 140 164 193 221	144 175 206 242 278		188 230 272 322 372	204 250 296 350 405	379				
21 22 23 24 25	187 210 236 262 290	322	320 361 408 455 504	423 480 536	618	532 604 675	579 656 732	618 704 790	574 657 752 847 948		
26 27 28 29 30	317 348 380 414 449	480 524 573	554 612 669 732 795	724 794 869	836 918 1,006	920 1,010 1,107	1,004 1,101 1,208	978 1, 085 1, 192 1, 312 1, 430	1, 166 1, 284 1, 415	1, 366 1, 512	1, 448 1, 608
31 32 33 34 35	486 524 564 605 646	728 785 842	932 1,006 1,080	1, 112 1, 202 1, 292	1, 292 1, 398 1, 503	1, 429 1, 547 1, 664	1, 566 1, 696 1, 826	1, 696 1, 838 1, 980	1, 827 1, 981 2, 135	1, 966 2, 136 2, 306	1, 937 2, 106 2, 292 2, 478 2, 656
36 37 38 39 40	732 778 827	1, 025 1, 090 1, 162	1, 318 1, 403 1, 496	1, 582 1, 688 1, 799	1, 847 1, 973 2, 102	2, 048 2, 188 2, 335	2, 248 2, 402 2, 568	2, 448 2, 620 2, 795	2, 648 2, 838 3, 022	2, 847 3, 048 3, 249	2, 833 3, 046 3, 259 3, 476 3, 694

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Table 80.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO	LUM	E (bo JSAB	ard for LE 1	eet) I 6-FO	BY N OT L	UME OGS	ER	OF	
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	5½	6
10	20 29	25 36	30 44	32 49	35 54						
11	38	48	59	66	74	78	81				
13	50	65	80	90	101	106	112				
14	62 77	81 102	100 126	114 145	128 164	136 176	188				
				-10							
16	92 110	122 146	151 182	175 212	199 242	215 262					
17 18	128	171	214	249	284	309	334				
19	148 169	200 228	251 288	292 336	334 385	364 420	394 455	482			
20	109	228	200	330	380	420	400	482	510		
21	192	261	330	386	443			560			
22	216 242	294 331	372 420	436 494	501 568	550 622		639 726	680 776		
24	269	368	468	552	636	695	754	813	872		
25	298	410	521	616	710	779	848	915	982		
26	328	451	574			863	943	1,018	1,092		
27 28		496 542	632 691			954	1,042 1,142	11,127	1,212		
29	427	591	755		1, 038	1, 144	1, 250	1, 358	1, 466	1, 566	1, 665
30	462	640	819				1, 357				
31	500	694	888	1,058	1, 228	1, 357	1, 486	1, 614	1. 741	1.870	2,000
32	538	748	958	1, 144	1,329	1,472	1,614	1,749	1,884	2,028	2, 173
33	579 620	864	1, 033	1, 234	1, 436	$\begin{bmatrix} 1,591 \\ 1,710 \end{bmatrix}$	1,746	2 037	2,040	$\begin{vmatrix} 2,200 \\ 2,373 \end{vmatrix}$	2, 361 2, 549
35	664	928	1, 191	1, 426	1, 662	1,842	2, 023	2, 198	2,372	2, 557	2, 742
36	708	991	1, 274	1, 526	1, 779	1. 974	2, 169	2, 358	2, 548	2. 742	2, 936
37	754	1,057	1, 360	1, 634	1, 907	2, 116	2, 324	2, 532	2, 740	2, 947	3, 154 3, 371
38	801	1,124	1, 446	1,740	2, 035	2, 258	2, 480	2, 706	2, 933	3, 152	3, 371
40	900	1, 267	1, 634	1, 966	2, 298	2, 558	2, 819	3, 064	3, 309	3, 560	3, 811
	L	1	1	J	U	L	1	1	1	1,,	1-, 31-

Table 81.—Gross volume of tree, Doyle log rule

Tree diam- eter		VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS									
(inches)	1	1½	2	$2\frac{1}{2}$	3	31/2	4	$4\frac{1}{2}$	5	5½	6
10 11 12 13 14 15	21 30 40 52 64 80	26 38 51 68 84 106	31 46 62 83 104 131	34 52 70 94 118 151	37 57 77 105 133 171	81 111 141 184	85 117 149				
16 17 18 19 20	96 114 132 153 174		158 190 222 260 297	184 221 259 304 348	209 252 296 347 398	226 274 322 378 434	243 296 348 410				
21 22 23 24 25	198 222 249 276 308	378	340 383 432 480 538	399 450 509 567 636	654	501 567 641 715 806		838	702 800		
26 27 28 29 30	339 372 404 440 475	513 559 610	595 654 714 779 844	776 848 926	897 981 1,072	989 1, 082 1, 182	1, 081 1, 182 1, 292	1, 170 1, 281 1, 404	1, 258 1, 380 1, 516	1, 469 1, 620 1, 772	1, 558 1, 724
31 32 33 34 35	514 552 594 635 682	828 886	985 1, 061 1, 137	1, 176 1, 268 1, 361	1,367 1,476 1,585	1, 514 1, 636 1, 758	1,661 1,796 1,930	1,801 1,948 2,094	1, 941 2, 100 2, 259	1, 930 2, 090 2, 266 2, 441 2, 640	2, 239 2, 431 2, 623
36 37 38 39 40	776 824 874	1, 022 1, 089 1, 157 1, 230 1, 302	1, 402 1, 490	1, 685 1, 794 1, 908	1, 968 2, 098 2, 231	2, 185 2, 330 2, 482	2, 402 2, 561 2, 732	2, 618 2, 795 2, 976	2,833 3,029 3,220	3, 048 3, 256 3, 464	3, 262 3, 483 3, 707

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Table 82.—Gross volume of tree, Doyle log rule

Tree diam- eter		VOI			ard fe					OF	
(inches)	1	1½	2	2½	3	31/2	4	41/2	5	51/2	6
10 11 12 13 14	22 32 41 54 67 82	28 40 52 70 88 109	33 48 64 86 109 136	36 54 72 98 124 156	38 59 80 110 140 177	84 116 149 190	88 123				
15 16 17 18 19 20	98 118 137 158 180	130 157 184 214 244	162 196 231 270 308	188 228 270 315 360	214 261 308 360 413	232 284 336 393 451	249 306 363				
21 22 23 24 25	204 228 257 286 316	278 311 352 392 435	351 394 446 499 554	412 464 526 590 655	473 533 606 680 756	518 586 665 744 831	564 638 724 809 906	600 682 778 874 979	725 832 939		
26 27 28 29 30	346 381 416 452 488	477 526 576 627 678	608 672 736 802 868	954	923 1, 014 1, 106	1, 018 1, 118 1, 220	1, 113 1, 223 1, 334	1, 206 1, 326 1, 451	1, 298 1, 430 1, 568	1, 522 1, 676 1, 828	1, 615 1, 784
31	527 566 610 655 700	915	1,011 1,093 1,175	1, 208 1, 308 1, 408	1, 406 1, 523 1, 640	1, 558 1, 688 1, 820	1,710 1,854 1,999	1, 855 2, 013 2, 172	2,000 2,172 2,344	1, 991 2, 154 2, 343 2, 532 2, 722	2, 307 2, 514 2, 721
36 37 38 39 40	706	1 118	1 430	1 730	2 022	2 246	2 470	2 603	2 016	2, 913 3, 138 3, 362 3, 573 3, 784	3 350

Table 83.—Gross volume of tree, Doyle log rule

Tree	VOLUME (board feet) BY NUMBER OF USABLE 16-FOOT LOGS										
diam-				USAE	BLE 1	6-FO	от 1	.ogs			
eter (inches)	1	11/2	2	21/2	3	31/2	4	41/2	5	51/2	6
10	23	29	35	38	41						
11	34	43	52	58	64						
12	44	56	69	78			96				
13	56	74	91	104	116	123	130				
14	69	91	113	129	145	154	100				
15	86	114	141	162	184	198	212			- 	
16	102	136	169	196		242	261				
17	120	161	202	2 36		292	316		l	l	
18	139	187	235	274	314	342	370				
19	162	219	276	323	370	404					
20	185	251	317	372	427	466	506	538	570		
21	211	288	364	428	492	539	586	626	666		
22	237	324	411	484	557	612		714	761		
23	264	362	461	544	628	689	750	806	863		
24	292	402	511	604	698	765		898	965		
25	324	447	570	675	780	858	937	1,012	1, 088		
26	357	493	629	746	862	952	1,042	1, 126	1, 211		
27	390	540	690	820	949	1,048	1, 146	1, 242	1,337		
28	424		752		1,036	1, 144	1, 251	1,357	1,463	1,558	1,652
29	463	643	823				1,372				
30	502	698	894	1,064	1, 235	1, 364	1, 492	1, 626	1,761	1,889	2, 017
31	544			1, 159	1,347	1,491	1, 635	1,778	1,920	2, 064	2, 209
32	586	817	1,048	1, 254	1, 459	1,618	1,778	1,929	2,080	2, 240	2, 401
33	628	877	1, 126	1,348	1,570	1,743	1,916	2,080	2, 244	2,422	2,600
34	671	938	1,205	1,444	1,682	1,868	2,054	2, 231	2, 408	2,603	2,798
35	719	1,008	1, 296	1,554	1,812	2, 014	2, 216	2, 410	2, 603	2,808	3, 014
36	767	1,077	1,387	1,664	1, 942	2, 160	2, 377	2, 588	2,798	3, 014	3, 229
37	816	1, 146	1,476	1,776	2,076	2,308	2, 540	2,770	3,000	3, 228	3, 456 3, 684 3, 930
38	864	1, 215	1,566	1,888	2, 209	2, 456	2,702	2,952	3, 202	3, 443	3,684
39	918	1, 294	1, 670	2, 012	2, 354	2, 622	2,890	3, 150	3, 410	3, 670	3, 930
40	973	1, 374	1, 774	2, 137	2,500	2, 788	3, 077	3,348	3,619	3, 898	4, 176
			-								

Table 84.—Gross volume of tree, Doyle log rule

Tree diam- eter		VO					BY N OT I			OF	
(inches)	1	1½	2	21/2	3	31/2	4	4½	5	51/2	6
10	24 34 45 58 72 88	30 44 58 76 95 117	36 54 71 94 118 146	40 60 80 107 135 168	43 66 89 120 152 190						
16	104 124 144 167 190	138 166 194 226 258	173 208 244 286 327	201 243 285 334 384	229 278 326 383 440	248 302 356 418 482	268 326 385 454 523				
21 22 23 24 25	216 243 273 303 334	296 333 375 417 461	375 423 477 531 588	440 498 563 628 696	506 572 649 726 804	556 630 714 796 886	606 688 778 867 968	646 736 837 936 1,046	785 896 1,006		
26	365 401 437 476 515	504 556 606 662 717		843 923 1, 009	976 1,070 1,170	1, 078 1, 182 1, 293	1, 181 1, 294 1, 416	1, 280 1, 404 1, 541	1, 378 1, 515 1, 666	1, 613 1, 781	1, 711 1, 896 2, 081
31 32 33 34 35	558 600 646 692 738	838 903 968	1,075 1,160 1,244	1, 286 1, 390 1, 492	1, 498 1, 619 1, 740	1, 663 1, 798 1, 933	1, 828 1, 977 2, 126	1, 984 2, 148 2, 311	2, 140 2, 318 2, 496	2, 306 2, 502 2, 698	2, 276 2, 471 2, 686 2, 901 3, 106
36	836	1, 176	1.516	1.824	2 132	2.371	2 610	2 848	3 086	3 322	3, 312 3, 558 3, 803 4, 052 4, 302

Table 85.—Gross volume of tree, Doyle log rule

Tree diam- eter		vo			oard f					OF	METERS OF THE STATE OF
(inches)	1	11/2	2	2½	3	3½	4	41/2	5	51/2	6
101112131415	25 36 46 60 74 91	32 46 60 79 98 121	38 56 73 98 122 151	42 62 82 111 140 174	45 68 92 124 157 198	97 132 168 214	102 140 179 230				
16 17 18 19 20	108 128 149 172 196	144 172 201 234 267	180 216 253 296 338	210 252 296 346 396	239 288 338 396 455	260 315 370 434 499	281 342 402 472 543				
21 22 23 24 25	223 250 280 310 343	304 342 385 427 474	386 435 490 544 604	454 512 579 644 716	522 590 668 745 829	574 650 734 818 914	626 709 800 890 998	668 760 861 962 1, 079	810 922 1, 034		
26 27 28 29 30	376 412 449 489 529	520 572 624 680 737	665 732 799 872 945	870 951 1,039	913 1,008 1,103 1,206 1,309	1, 114 1, 220 1, 334	1, 220 1, 336 1, 461	1, 323 1, 451 1, 590	1, 426 1, 566 1, 720	1,668 1,839	1,770 1,958
31 32 33 34 35	572 615 662 708 758	859 925	1, 103 1, 188	1, 321 1, 424	1, 424 1, 539 1, 661 1, 783 1, 917	1,709 1,846	1,879 2,030	2,040 2,206	2, 202 2, 382	$\begin{bmatrix} 2,372 \\ 2,572 \end{bmatrix}$	2, 543 2, 761
36 37 38 39 40	860 912 968	1, 210 1, 284 1, 366	1, 560 1, 657 1, 764	1,878 2,000 2,128	2, 051 2, 196 2, 342 2, 492 2, 641	2, 444 2, 606 2, 778	2, 692 2, 870 3, 064	2, 938 3, 138 3, 342	3, 185 3, 405 3, 620	3, 430 3, 664 3, 898	3, 674 3, 923 4, 177

